MINOLTA DYNAX 7 (2162-291)
MINOLTA MAXXUM 7 (2162-490)
MINOLTA α-7 (2162-600)

CODE



Type

35mm SLR with built-in flash, autofocus (AF), and autoexposure (AE)

Lens Mount

Minolta A-type bayonet mount
(Including AF zoom xi lens. Power zooming and focusing available.)

Shutter

Type	Electronically-controlled, vertical-traverse, focal-plane type
Range	1/8000-30s; Bulb (up to approx. 7 hours with fresh batteries. Based on Minolta's standard test method; Time count-up display is available.)
Flash sync	1/200s or slower With shutter speeds faster than 1/200s, camera automatically switches to High-speed Sync (HSS). (only available with the dedicated flash #8835, #8841 and #8842)

Exposure

Modes	P (PA/PS), A, S and M Full-auto ([P]), Memory 1, Memory 2, Memory 3 (Can be switched to STF mode with a Custom function) Manual setting for shutter speed or aperture available in 0.3EV or 0.5EV stop increments.
Metering Type	TTL metering, Direct TTL metering for flash
Metering Modes	Ambient Light: 14-segment Honeycomb-pattern, Center-weighted Average, Spot metering (dia. 5.5mm) Flash Metering: Advance Distance Integration (ADI) metering, TTL 4-segment or TTL Average (available with a Custom Function).
Metering Cell	14-segment Honeycomb-pattern SPC (silicone photo cell), 4-segment flash-metering SPC
Metering Range	(At ISO 100 with f/1.4 lens) 14-segment Honeycomb-pattern: EV 0 - 20 Center-weighted Average: EV 0-20 Spot: EV 3-20

Film Speed

Automatic setting for DX-coded films of ISO 25 to 5000 (1/3EV increments)
Manual setting for ISO 6 to 6400 (1/3EV increments)
With flash: ISO 25-1000
Non DX-coded film is set to the previous ISO setting.

Exposure Compensation

Ambient	+/– 3 EV in 1/2 EV increments +/– 2 EV in 1/3 EV increments (+/– 3 EV with a Custom Function)
Flash	+/– 2EV in 1/2 EV increments

AE Lock

Exposure is automatically locked when focus is locked, or when the AE-lock button is pressed.

Focus

Focus modes	Auto/manual focus can be selected
Main Features	Wide focus area; Any local focus area is selectable from 9 point sensors Multi-dimensional predictive focus control available for subjects moving at speeds up to 20mm per second on the film plane. Automatic AF-mode selection (DMF available with a Custom function)/Continuous AF/Single-shot AF DMF enables manual focusing without switching from autofocus mode when focus is locked in single-shot AF. Audio indication of focus lock is selectable.
Type	Minolta's through-the-lens (TTL) phase-detection system with CCD line sensors (9-point AF System with Center Dual Cross-hair Sensors (CDC912)). Highly accurate (X) type AF sensor in the center (operates with f/2.8 or faster aperture setting)
AF sensitivity	BV –6 to 13; EV –1 to 18 (at ISO 100)
AF illuminator	Built-in LED aligned with Center Dual Cross-hair Sensors. Activated in low-light/low-contrast situations; Range: 0.7 - 7m (based on Minolta's standard test methods with 50mm lens)
Manual Focus	By visually monitoring the focus on the Spherical Acute Matte viewfinder screen and/or by observing the focus signals in the viewfinder data panel.

Film Transport

Loading	Auto threading, auto advance to the first frame by closing the back cover; Select-frame film transport available with a Custom function.
Film Chamber Lock	Yes
Frame Counter	Forwards/backwards counter selectable with a Custom function.
Drive Modes	Single-frame advance Continuous Advance: Drive-speed can be selected from 4 fps* or 2 fps *4 fps in manual focus mode. 3.7 fps in Continuous Autofocus mode. Single-frame Advance Exposure-Bracketing: 3-, 5- or 7- exposure series can be selected in either 0.3, 0.5, 0.7 or 1.0EV increments. Flash bracketing activated in flash photography.
•	Continuous Advance Exposure-Bracketing; 3-, 5- or 7- exposure series can be selected in either 0.3, 0.5, 0.7 or 1.0 EV increments.
Rewind	Auto rewind; Manual start of rewind available

Rewind Time (24-exp / 36-exp.)	High-speed: Approx. 5.5s/7s Silent (available with a Custom Function): Approx. 12s/15.5s
Self-timer	Electronic with 10-second delay, cancelable. 2-second delay (delayed shutter mirror lock-up function) can be selected. (Uncancellable)
Multiple Exposure	2 or more exposures (Unlimited)

Viewfinder

Type	Eye-level fixed pentaprism
Pentaprism	Optical glass
Focusing Screen*	Spherical Acute Matte;G-type as standard. *User irreplaceable; Replacement is only available at Minolta service centers (G/M/ML/L/S).
Field-of-view	Approx. 92% x 94% (with 50mm, f/1.4 at infinity)
Magnification	0.8x (with 50mm at infinity)
Eye-relief	Long eye-relief (22.5mm from the eyepiece, 18.5mm from the eyepiece frame)
Diopter	–1 diopter Adjustable from –2.5 to +0.5 diopter
Eyepiece Shutter	None
Eyepiece Cup	Detachable

Indication

Navigation Display (Dot-matrix)	Exposure-mode indicator, Flash-mode indicator, AF-mode indicator, Metering-mode indicator, Focus-area indicator, Data-memory-on indicator, Battery condition indicator, Imprint indicator, Cartridge mark, Frame counter, Film transport signals, Flash-compensation display, Exposure-compensation display, Aperture display, Audio-on indicator, Drive-mode indicators, Shutter-speed display, Release priority indicator
Top Data Panel (Segment)	Shutter-speed display, Cartridge mark, Frame counter/Aperture display, Film-transport signals
On-screen	Spot-metering area, Local focus area, Spot-focus area, Wide focus area
Viewfinder Bottom	Flash-compensation indicator, Flash indicator, Wireless/Remote flash indicator, High-speed-sync indicator, Manual-focus indicator, AEL indicator, Focus signals, Shutter-speed display, Exposure-mode indicator, Aperture display, Metering index, Metering-mode indicator, Frames-remaining counter

Built-in Flash

Type	Built-in
Control	Manual switchover. Lift-up for Fill Flash, push down for Flash Cancel. When lifted up in Full-auto mode, autoflash is available.
Guide number	12 (in meters at ISO 100)
Coverage	24mm
Recycling time	Approx. 2s. (approx. 3.5s with Red-eye Reduction or Wireless/Remote Off-camera Flash. Based on Minolta's standard test method.)

Flash modes
Fill Flash, Flash Cancel, Red-eye Reduction (pre-flash), Wireless/Remote Off-camera Flash (1/60s or slower; 1/30 or slower with 2:1 ratio; Synchronizes with all speeds with high-speed sync), Rear Flash Sync (1/60s or slower), High-speed sync (HSS)* (1/200 or faster; available with the dedicated flash #8835, #8841 or #8842)
*HSS does not work accurately under fluorescent light. Also measurement with the flash or color meter will be inaccurate.

Panorama

None

Eye-start Automation

AF and AE automatically activated/deactivated by combination of eyepiece and grip sensors. Eye-start is turned on/off by eye-start switch.

Data Memory

Stores photographic data of up to 7 rolls of 36-exposure film.

Every roll of film
Data number, ISO value

Every frame
Aperture, lens focal length, lens smallest f-number, exposure compensation/bracketing values, shutter speed, flash compensation/flash bracketing values (including flash on/off status), exposure mode, metering mode, date/time information

Others

Remote-control terminal (with a sliding lid), 35 Custom Functions, depth-of-field preview, screw-type PC terminal (available to both center-positive and center-negative polarities), Audio (Self-timer countdown, focus lock confirmation; On/Off selectable)

Power

Two 3-volt CR123A/DL123A lithium batteries.
4-stage indicator appears when the camera is turned on.

Battery Performance (with fresh batteries)

The following values will vary according to the condition.

Battery Type	**Lithium (CR-123A)**	
Temperature (°C)	**20**	**-20**
Flash use 0%	45/30	13/9
Flash use 50%	21/14	6/4
Flash use 100%	13/9	4/2

(Approx. rolls of 24-exp. / 36-exp.)

Test Condition
Lens (24-105 f/3.5-4.5) is focused from infinity to 2m, three times, and the shutter-release button held partway down for 10 sec. before each exposure. (Other basic photographic procedures are performed beforehand.)

Dimensions

143.5 (W) x 97.5 (H) x 65.5 (D) mm

Weight (without battery)

575g

MINOLTA α-7 LIMITED (For China) (2162-091)
MINOLTA DYNAX 7 LIMITED (For Europe) (2162-250)
MINOLTA α-7 LIMITED (For Japan) (2162-650)

CODE



Major specifications are as same as #2162-291, -490 and 600 (pg. 1~4).
Upgraded specifications of #2162-091, -250 and -650 as follows.

ITEMS	LIMITED (2162-091,250,650)	NORMAL (2162-291,490,600)
Data memory (Every roll of film)	18 rolls of 36-	7 rolls of 36-exposure film
Opening/ending frame	Available	Not Available
Data number count at failure of Initial load	Not Available	Available

Upgraded exterior parts modification on #2162-091, -250 and 650 as follows.
Refer to the parts list, showing exclusive parts for #2162-091, -250 and -650.

- External cover : Leather tone paint (top/bottom/front/flash/right and left side cover)
- Exposure-mode dial decoration ring, Exposure-compensation dial decoration ring: Gold
- Exposure-mode dial plate, Exposure-compensation dial plate: Metal plate (Anàstatic index)
- AF/MF control button, Focus-area selector : The shape is changed.
- Model name plate on front cover: Gold
- Minolta logo on front cover: Gold
- Syncro terminal : Gold-plating
- Serial number plate: 4 digits (8 digits for China)

MINOLTA α -7 (Chinese Navigation model) (2162-092)

CODE



Major specifications are as same as α -7 (#2162-600) or α -7 Limited (#2162-091 and -650) (pg. 1-5).
Upgraded specifications of #2162-092 as follows.

Items	#2162-092 α -7 (Chinese navigation)	#2162-091, -650 α -7 Limited	#2162-600 α -7
Custom 35 Language (Navigation display)	1 Chinese 2 English 3 Japanese	1 Japanese (Jpn) 2 English (Eng) 3 German (Deu) 4 French (Fra) 5 Spanish (Esp)	1 Japanese (Jpn) 2 English (Eng) 3 German (Deu) 4 French (Fra) 5 Spanish (Esp)
Data memory Number of rolls	18 rolls of 36-exposure film	18 rolls of 36-exposure film	7 rolls of 36-exposure film
Opening / Closing screen	Not Available	Available	Not Available
Data number count at failure of Initial load	Not Available	Not Available	Available
Serial number plate	8 digits	8 digits (#2162-091) 4 digits (#2162-650)	8 digits

Adjustments & Checks after repair

After making replacement or repair of the following items, check or adjust as required in the table.

☆ : Necessary check ★ : Necessary adjustment

Parts / Adjustment / Check item	MIRROR BOX ASSY		SHUTTER ASSY	FPC-A ASSY		FPC-B ASSY	FLASH CONVERTER PCB ASSY	FPC-J ASSY
	Removal	Replacement	Replacement	Replacement —	Replacement Data Copy	Removal	Replacement	Replacement
Body Back	☆	★	☆			☆		
Viewfinder Back	☆	★	☆			☆		
Manual SS			★	★				
SPC Position	☆	★						
AE	☆	★	☆	★				
Aperture Preset		★		★				
Flash SPC Level		★		★				
FLash Level		★		★			★	
Frame Positin				★				
B. C. Lock Voltage				★			★	
IP-LED				★				★
PI-PR		★		★	★			
Model Set				★*				
AREA	☆	★	☆	☆	☆	★		
PITCH, YAW	☆	★	☆	☆	☆	★		
EZ	☆	★	☆	★	☆	★		

*: NORMAL models (2162-291, -490, -600) are not necessary.

Parts / Adjustment / Check item	WINDING BASEPLATE ASSY	AF/CHARGE BASEPLAET ASSY	APERTURE BASEPLATE ASSY	FLASH ASSY	PENTAPRISM ASSY	SPC1 HOLDER ASSY	SPC2 HOLDER ASSY
	Replacement	Replacement	Replacement	Replacement	Removal	Removal	Replacement
Body Back		☆	☆				☆
Viewfinder Back		☆	☆		★	☆	☆
Manual SS							
SPC Position		☆	☆		★	★	
AE		☆	☆		★	★	
Aperture Preset			★				
Flash SPC Level							★
FLash Level				★			★
Frame Positin	★						
B. C. Lock Voltage							
IP-LED							
PI-PR		★	★				
Model Set							
AREA		☆	☆				★
PITCH, YAW		☆	☆				★
EZ		☆	☆				★

Replacing FPC-A Assy #0401

Initial setting after FPC-A Assy replacement is:

Flash charge is inhibited.

Shutter release is available without lens attached (with film loaded).

Erratic display in the data panels.

Flash level Adjustment (pg. 59) will reset these settings.

If abnormal display still shows after resetting, some faults in items other than FPC-A Assy are presumed.

About data copy (pg. 70)

Data Copy of adjustment data enables you to skip some adjustment/check items after FPC-A Assy #0401 replacement. The data can be transferred from the original FPC-A Assy to the newly installed one.

Data Copy is available even when the camera is inoperative for any reason except for;

- Faulty IC-1 (Defective element, or poor soldering)
- Trouble in power supply line (FPC-A Assy)
- Signal transmission failure (Such as disconnection or insufficient contact).

Using HIT System

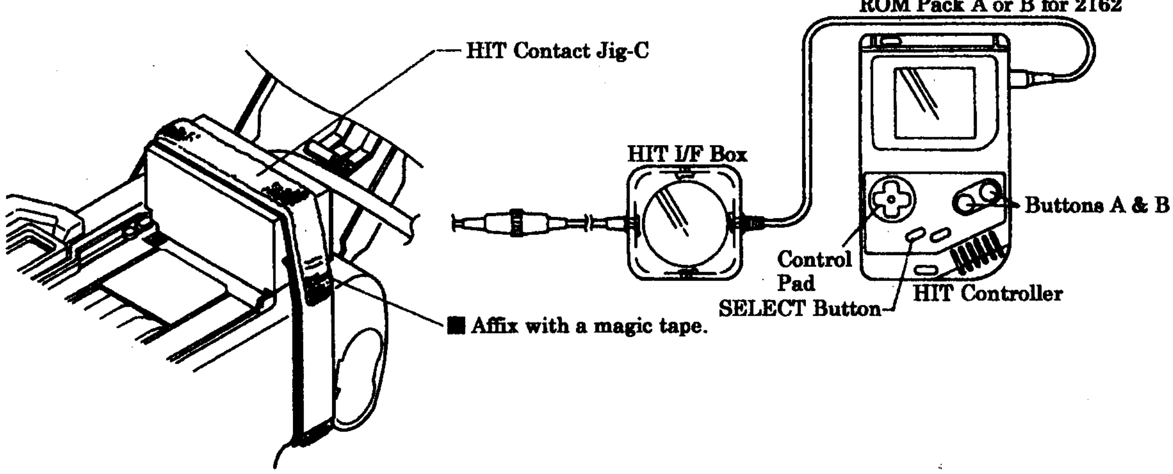
Before getting started, set CUSTOM function 13 of the camera to 3 to select the longest display duration.
After adjustment, be sure to reset the setting.

Basic operation

Before attaching the contact jig-C to or detaching from the camera, be sure to remove the power supply from the camera and turn off the HIT controller.
In case of making a Data Copy of adjustment data, keep the controller activated.

1. Attach the contact jig to the camera so that the probes of the jig properly make contact with the check lands. (Fig. 1)
2. Set up the equipment as in Fig. 1.
3. Power the camera, then turn on the camera and HIT Controller. Main menu will appear in HIT Controller display. (Fig. 2)
4. Select an item with Control Pad. The selected item appears in a black box. Then press SELECT Button to enter.

■Fig. 1



■Fig. 2

2162 ADJ. PROGRAM
MENU1
SS ADJ.
AE ADJ.
PRETRIGGER ADJ.
FLASH ADJ.
FRAME ADJ.
BC-LOCK ADJ.
IP-LED ADJ.

2162 ADJ. PROGRAM
MENU2
PI-PR ADJ.
MODEL SET
ASSIST MODE

2162 ADJ. PROGRAM
AREA ADJ.
PITCH, YAW ADJ.
EZ ADJ.
EZ CHECK

Adjustment/Check items available with 2162 ROM Pack

<Main Menu> — <Sub Menu>

ROM Pack-A for 2162

- SS ADJ. (P. 54)
- AE ADJ.
  - AE ADJ. (P. 57)
  - AE CHECK (P. 57)
  - SPC ADJ. (P. 55)
- PRETRIGGER ADJ. (P. 56)
- FLASH ADJ.
  - FLASH-SPC LEVEL ADJ. (P. 58)
  - FLASH-SPC LEVEL CHECK (P. 58)
  - FLASH LEVEL ADJ. (P. 59)
  - FLASH LEVEL CHECK (P. 59)
- FRAME ADJ. (P. 60)
- BC – LOCK ADJ. (P. 63)
- IP-LED ADJ. (P. 61)
- PI-PR ADJ. (P. 62)
- MODEL SET (P. 62)
- ASSIST MODE (P. 69)
  - DATA COPY (P. 70)
  - TROUBLE CODE (P. 5, Trouble-shooting)
  - FLASH CHARGE ON/OFF (P. 3)
  - MATTE TYPE SET (Supplementary Info. S01E)
  - OPENING DISPLAY SET (Supplementary Info. S09E)

ROM Pack-B for 2162

- AREA ADJ. (P. 65)
- PITCH, YAW ADJ. (P. 66)
- EZ ADJ. (P. 68)
- EZ CHECK (P. 67)

Body Back Adjustment

Equipment Required

Body Back Gauge
Flat Plate-A
Dial Gauge

Adjustment

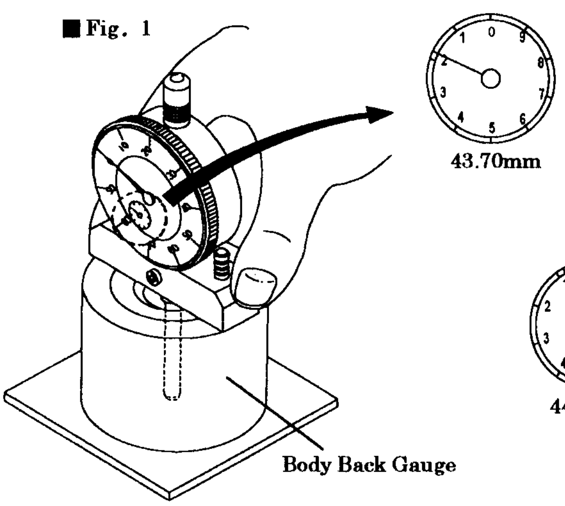
1. Set Dial Gauge as in Fig. 1.
2. Measure distance between guide rail and Lens Mount surface as in Fig. 2.
3. Check that the reading meets the standard.
   If larger than standard: Replace Lens Mount with #2072-1010-81, and install or remove washers.
   NOTE: The flange of #2072-1010-81 is 0.1mm thinner than that of #2072-1010-02.

■ Washer

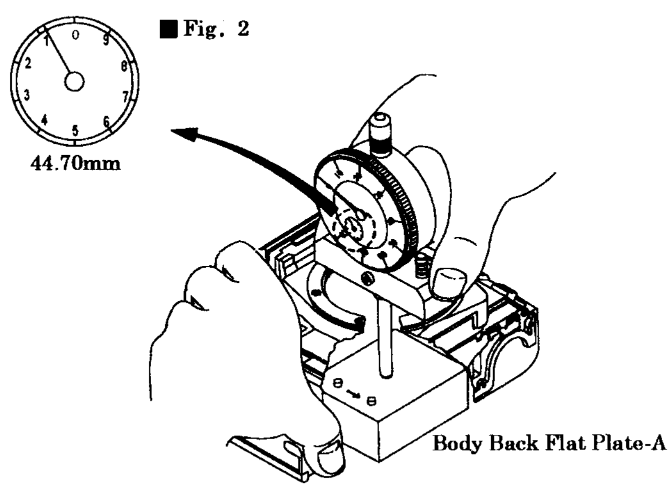
Part No.	2005-1061-81	2005-1062-81	2005-1063-81
T=(mm)	0.02	0.05	0.1

Standard 44.7 ± 0.015mm (44.685 - 44.715mm)

■ Fig. 1



■ Fig. 2



Viewfinder Back Adjustment

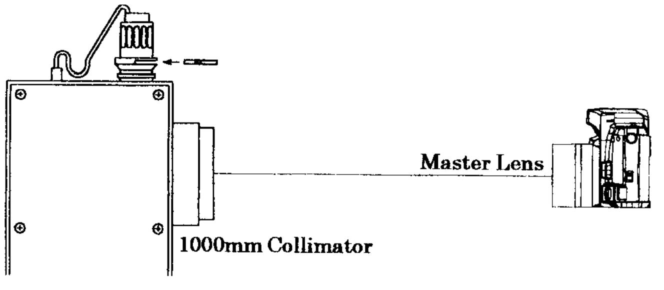
Equipment Required

1000mm Collimator
Master Lens
Hexagon Bar Wrench (1.5)

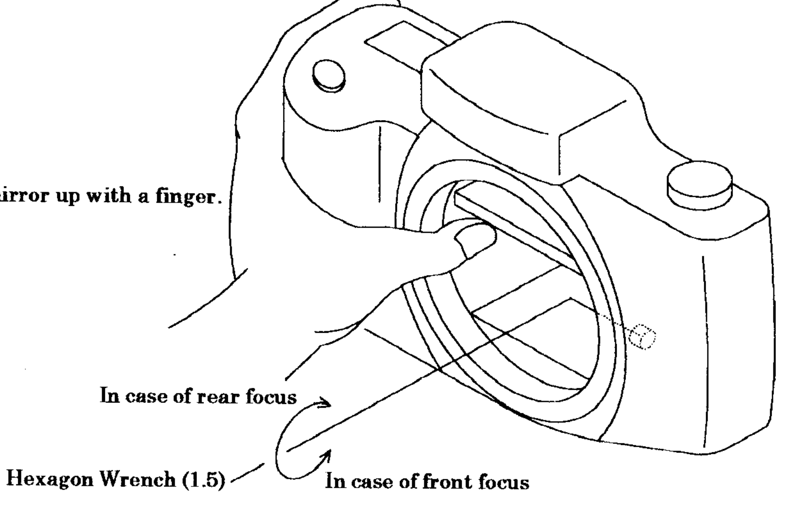
Adjustment

1. Set the camera as in Fig. 1 so that the chart is at the center of viewfinder. Set Master Lens to infinity (∞) as in Fig. 1.
2. Check that the chart is in focus. If not, remove the lens and adjust Mirror Stopper position as in Fig. 2.
3. Release the shutter several times and check that the chart is in focus at infinity (∞).

■ Fig. 1



■ Fig. 2



Manual Set SS & X-Sync. Time-lag Check

Equipment Required

Shutter Tester or Multi Camera Tester and Master Lens
Sync. cord

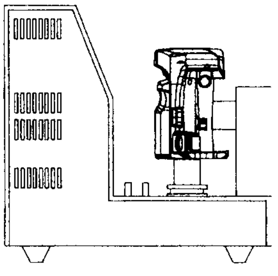
Manual SS Check

1. Set up the equipment as in Fig. 1.
2. Release the shutter at each shutter speed, and check that the reading meets the table-1 below.

X Sync. Time-Lag Check

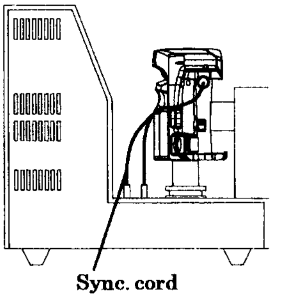
1. Set up the camera as Fig. 2.
2. Release the shutter and check that the reading meets the standard in table-2.

■ Fig. 1



Multi-Camera Tester
Receiver: RW-3508
DIFF/PARA: DIFF
SH: EXP.T
Luminance: EV 15
Camera
Aperture: Open
Focus mode: M
Master Lens
Focus Ring: ∞

■ Fig. 2



Multi-Camera Tester
Receiver: RW-3508
DIFF/PARA: DIFF
SH: RUN.T
Luminance: EV 15
Camera
Aperture: Open
Focus mode: M
Master Lens
Focus Ring: ∞

Table-1

SS (ms)	Standard (ms)	Tolerance (ms)	Unevenness of exposure
1/8000	0.122	0.078 - 0.192	Standard: Difference between Max. and Min. readings among A, B and C: 0.6EV or less. Difference between both A&B and B&C: 0.3EV or less.
1/4000	0.244	0.167 - 0.357	
1/2000	0.488	0.357 - 0.667	
1/1000	0.977	0.740 - 1.298	
1/500	1.950	1.59 - 2.40	
1/250	3.910	3.17 - 4.81	
1/125	7.810	6.35 - 9.62	
1/60	15.60	12.7 - 19.2	
1/30	31.30	29.2 - 33.5	
1/15	62.50	58.3 - 67.0	
1/8	125	117 - 134	
1/4	250	233 - 268	
1/2	500	467 - 536	

Table-2

SS (ms)	Item	Tolerance (ms)
1/200 (1/60)	X-Sync. Delay time	0.3 or more
	From X-contact ON to rear curtain appearance	1.45 or more (4.65 - 5.55)

*Figures in brackets ( ) are for rear-flash sync.

AE Level Check

Equipment required

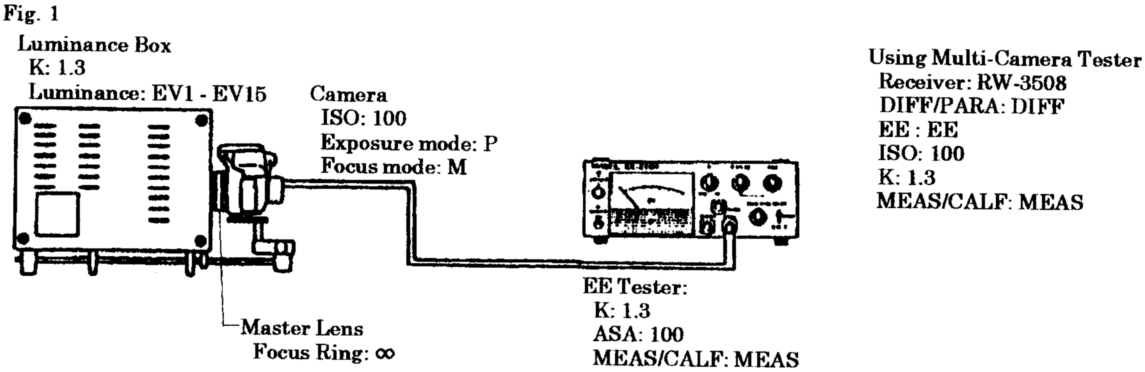
Luminance Box, EE Tester or Multi-Camera Tester
Master Lens

Check

1.Set the equipment as in Fig. 1.
2.Set luminance and camera setting according to the table below. Release the shutter for each setting from step-1 to -3, and check that the reading is within the tolerance.

Exposure mode	Metering mode	Luminance EV (LV)	Tolerance
P	14-segment honey comb	1 - 15	0±1.0EV

■ Fig. 1



Aperture Control Check

Equipment Required

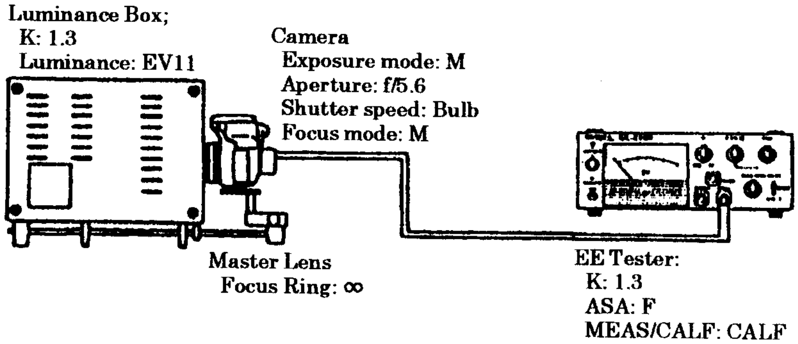
Luminance source
EE tester
Master Lens

Check

1. Set up the equipment as in Fig. 1.
2. Release the shutter and check that the reading is within standard.
   Reading may be above/below this range depending on the lens aperture tolerance.

Standard 0+/-0.3EV

■ Fig. 1



Flash Level Check

Equipment Required

Strobe Tester
Master Lens
An Xi-series PROGRAM (MAXXUM)FLASH
Standard Reflection Paper
Kodak Gold 100 exposed in a room for more than 1 day

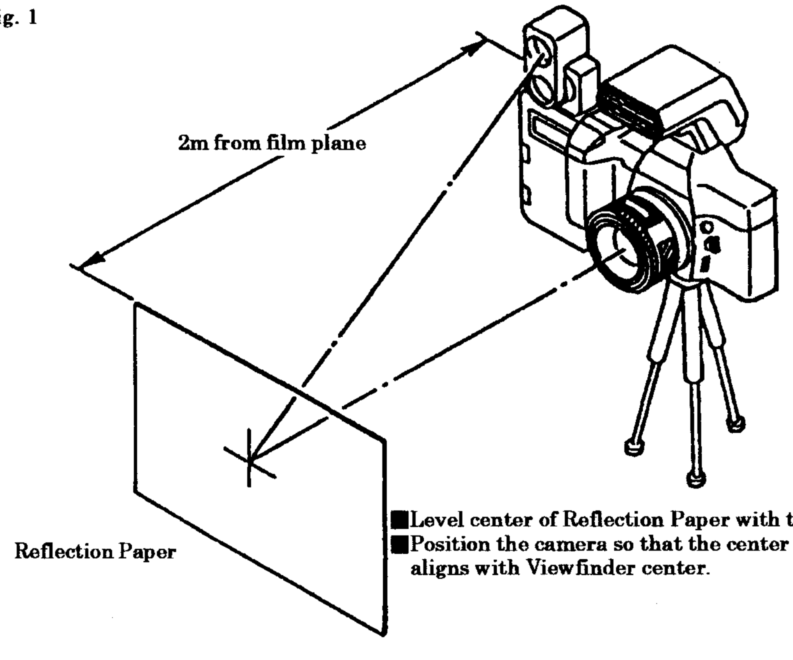
Check

Note: Perform in a dark room.

1. Set up the equipment as in Fig. 1.
2. Turn the flash on and check that the flash ready signal glows.
3. Hold Strobe Tester beside the camera so that its viewfinder center aligns with that of Reflection Paper. (Fig. 1)
4. Press Strobe Tester's measuring button to set to stand-by. "NON.C" blinks. Then release the shutter.
   Check that the reading is within standard.

Standard f/4 ± 0.5EV

■ Fig. 1



Camera
ISO: 100
Exposure mode: A
Aperture: f/4
With film loaded
Focus Mode: M
Master Lens
Strobe Tester
Reflection Type Receiver
Mode: NON. C
Flash
Power Level Selector: H

■ Level center of Reflection Paper with the lens' optical axis.
■ Position the camera so that the center of Reflection paper aligns with Viewfinder center.

Manual Set SS Adjustment

Equipment Required

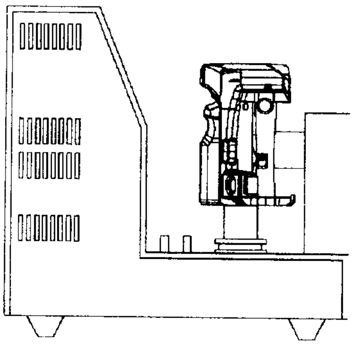
Shutter Tester or Multi Camera Tester and Master Lens
HIT Contoller
ROM Pack-A for 2162
HIT Contact Jig-C
I/F Box for HIT

Adjustment

1. Set up the equipment as in Fig. 1.
2. Set shutter speed to 1/8000.
3. Release the shutter several times and calculate an average of readings at B-Range.
   If the average is out of standard, perform adjustment below.
4. Setup the camera as Fig. 2.
5. Select SS ADJ. from the main menu and press SELECT Button.
6. Select "135" using the control pad.
7. Set the average (μ s) obtained at step-3 using the Control Pad and Button-A/-B, then press SELECT Button.
   - In $\pm$ 5 stop: Press Control Pad while pressing and holding Button-A.
   - In $\pm$ 50 stop: Press Control Pad while pressing and holding Button-B.
8. Press Shutter-Release Button partway down. "COMPLETE" appears when adjustment is complete.
9. Press SELECT Button to return to the previous menu.

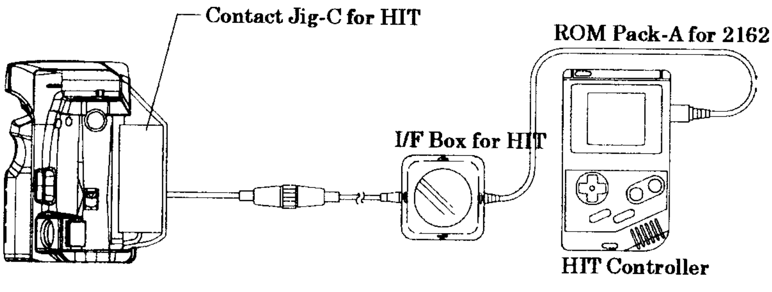
Standard: 0.078 - 0.192

■ Fig. 1



Multi-Camera Tester
Receiver: RW-3508
DIFF/PARA: DIFF
SH: EXP.T
Luminance: EV15
Camera
Aperture: Open
Focus Mode: M
Master Lens
Focus Ring: ∞

■ Fig. 2



SPC Position Adjustment

Before adjustment, remove the external parts, and use a remote-cord to turn S1 ON.
After completing this adjustment, always perform AE Adjustment (pg.57)

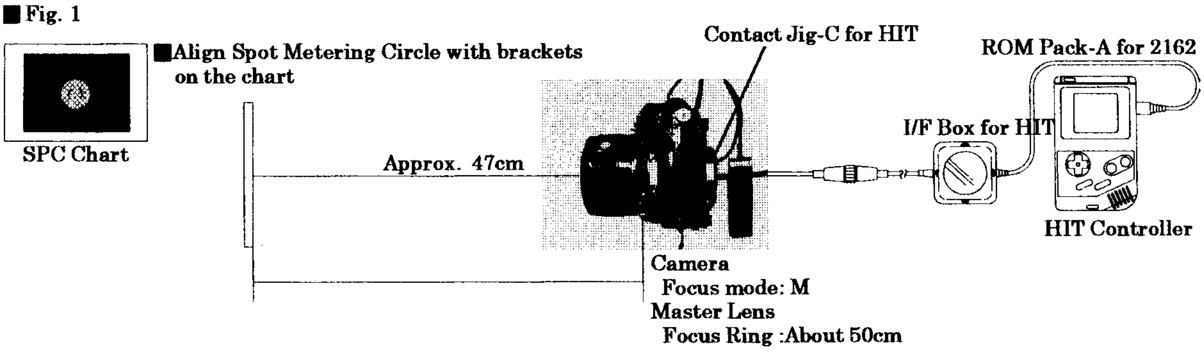
Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
Power Supply Adapter for 2162
DC power supply
SPC Chart
Remote-cord

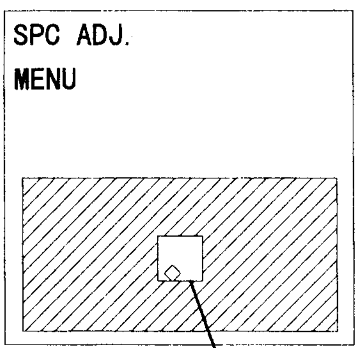
Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "AE ADJ." from the main menu using the control pad, and press the SELECT button.
3. Select "SPC ADJ." from the AE ADJ menu using the control pad, and press the SELECT button.
4. Press Shutter-Release Button partway down. (S1 ON)
5. Adjust eccentric screw (Fig. 3) so that display " ◇ " comes inside the white area in the display.(Fig. 2)
   Apply B-60 to the screws when adjustment is complete.
6. Press SELECT Button to return to the main menu.

■ Fig. 1

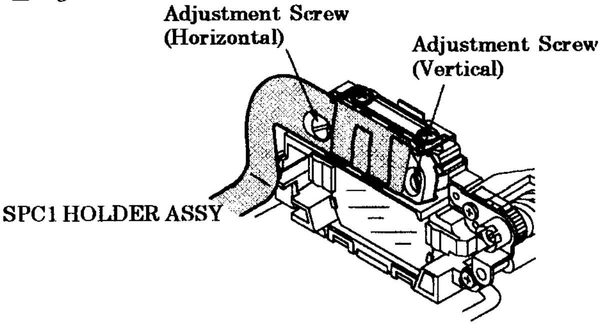


■ Fig. 2



Set the mark inside the white box.

■ Fig. 3



Aperture Preset Check & Adjustment

Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
HIT I/O Tester
Preset Signal Adapter

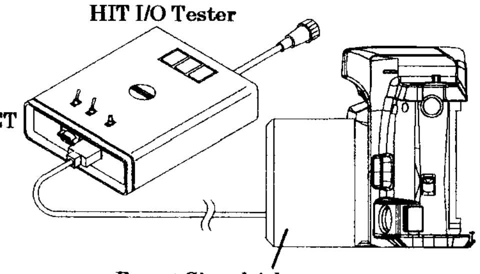
NOTE:These indications look similar in HIT I/O Tester display. Figures in HIT I/O Tester is in hexadecimal notation.	6 -------- 6 b -------- b

Check

1. Setup the equipment as in Fig. 1. And set camera to "M mode" and "Bulb".
2. Press Reset Button on HIT I/O Tester so that "00" appears in the display.
3. Set aperture to f/11, and release the shutter.
   Check that reading in the HIT I/O Tester is within the standard. (Reading appears while shutter is pressed down.)
   If out, make Aperture Preset Adjustment.

Standard f/11:Ab -bb

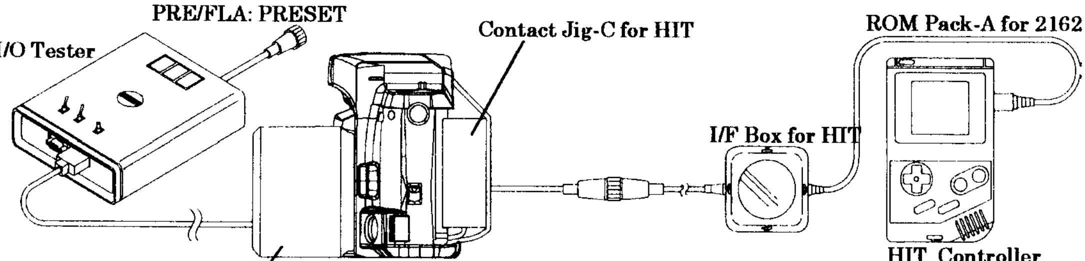
■ Fig. 1



Adjustment

1. Setup the camera as Fig. 2.
2. Select "PRITRIGGER ADJ." from the main menu and press SELECT Button.
3. Press SELECT Button again.
4. Press Reset Button on HIT I/O Tester so that "00" appears in the display.
5. Press Shutter-Release Button partway down. (S1 ON)
   The shutter is automatically released twice. Confirm the average of the readings of HIT I/O Tester.
6. Input the average to the HIT Controller, and press SELECT Button.
   - First digit: Press and hold Button-A while pressing Control Pad.
   - Second digit: Press and hold Button-B while pressing Control Pad.
7. Repeat step-4 to -6. The adjustment is automatically done for each aperture settings; f/4.5, f/9.5, f/19.
8. Press Shutter-Release Button partway down. COMPLETE appears when adjustment is complete.
9. Press SELECT Button to return to the main menu.

■ Fig. 2



AE Check & Adjustment

Equipment Required

Luminance source or Multi Camera Tester
Master Lens
HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT

Check

1. Set up the equipment as in Fig. 1.
2. Select "AE ADJ." from MENU 1 using the control pad, and press the SELECT button.
3. Select "AE CHECK" from AE ADJ menu using the control pad, and press the SELECT button.
4. Press Shutter-Release Button partway down.
5. Check the value in each cell is within the tolerance given in the table.
   Check with EV6, EV10, and EV15.
6. Press the SELECT button while holding the shutter-release button partway down to return to the previous menu.

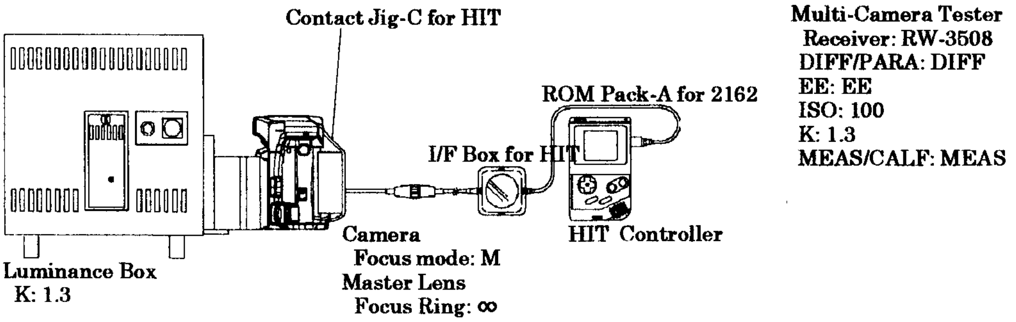
■ Standard

Luminance EV (LV)	Tolerance
6	0±0.25EV
10	0±0.5EV
15	0±0.25EV

Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "AE ADJ." from the main menu using the control pad, and press the SELECT button.
3. Select "AE ADJ." from the AE ADJ menu using the control pad, and press the SELECT button.
4. Set luminance to EV6, then press SELECT Button.
5. Press Shutter-release Button partway down (S1 ON).
6. Set luminance to EV15, and press SELECT Button.
7. Press the Shutter-release Button partway down. COMPLETE appears when adjustment is complete.
8. Press SELECT Button to return to the previous menu.

■ Fig. 1



Flash SPC Level Check & Adjustment

Equipment Required

Luminance source or Multi-Camera Tester
Master Lens
HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
Reflection Paper for Pressure Plate

Check

1. Set up the equipment as in Fig. 1.
2. Select "FLASH ADJ." from the main menu and press SELECT Button.
3. Select "FL-SPC LEVEL CHECK" from the FLASH ADJ menu using the control pad, and press the SELECT button.
4. Set luminance to EV12, and press SELECT Button.
5. Press Shutter-Release Button partway down.
   Shutter is released automatically, and "COMPLETE" appears in the display.
   Check that the reading is within the standard.
6. Press SELECT Button to return to the previous menu.

Standard: 0 to 1.32EV

FL-SPC LEVEL CHECK

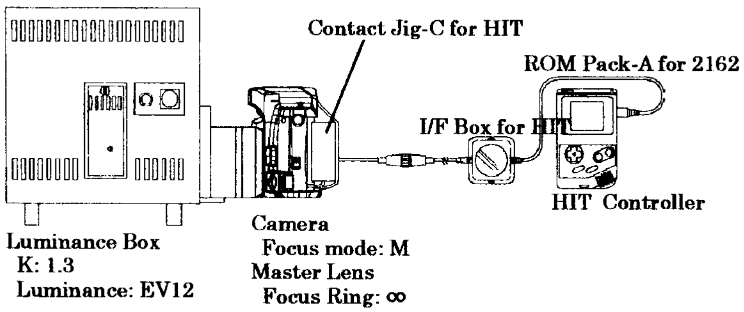
COMPLETE

MENU +0.06EV

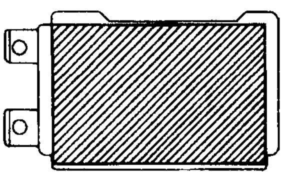
Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "FLASH ADJ." from the main menu and press SELECT Button.
3. Select "FL-SPC LEVEL ADJ." from the FLASH ADJ menu using the control pad, and press the SELECT button.
4. Set luminance to EV12, and press SELECT Button.
5. Press Shutter-Release Button partway down.
   Shutter is released automatically twice, and "COMPLETE" appears in the display.
6. Press SELECT Button to return to the previous menu.

■ Fig. 1



Multi-Camera Tester
Receiver: RW-3508
DIFF/PARA: DIFF
EE: EE
ISO: 100
K: 1.3
MEAS/CALF: MEAS
Luminance: EV12



■ Attach a Reflection Paper for Pressure Plate to a junk Pressure Plate. And hold them at the camera back on film plane.

Flash Level Check & Adjustment

Equipment Required

Luminance source or Multi Camera Tester <EF-8301>
Master Lens
HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
Reflection Paper for Pressure Plate

Check

1. Set up the equipment as in Fig. 1.
2. Select "FLASH ADJ." from the main menu and press SELECT Button.
3. Select "FLASH LEVEL CHECK" from the FLASH ADJ menu and press SELECT Button.
4. Set luminance to EV12, and press SELECT Button.
5. Press Shutter-Release Button partway down. (S1 ON)
   Shutter is released automatically, and "COMPLETE" appears in the display.
   Check that the reading is within the standard.
6. Press SELECT Button to return to the previous menu.

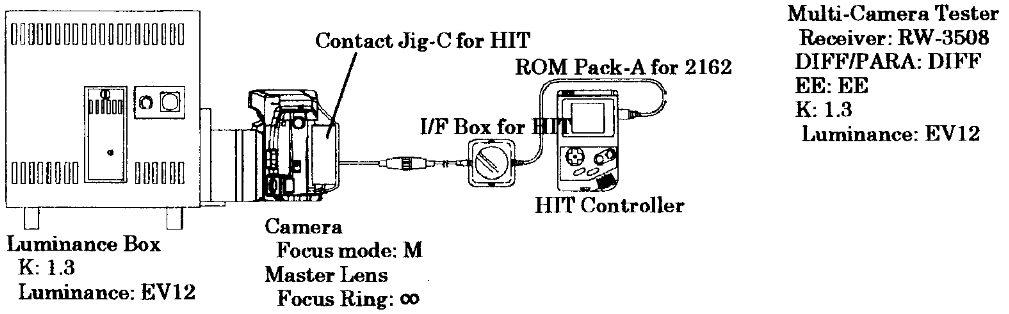
Standard +/-0.4EV

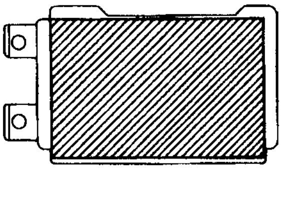
FLASH LEVEL CHECK
COMPLETE
+0.06EV
MENU

Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "FLASH ADJ." from the main menu and press SELECT Button.
3. Select "FLASH LEVEL ADJ." from the FLASH ADJ menu and press SELECT Button.
4. Set luminance to EV12, and press SELECT Button.
5. Press Shutter-Release Button partway down.
   The shutter is released automatically for three times, and "COMPLETE" appears in the display.
   Check that the reading is within the standard.
6. Press SELECT Button to return to the previous menu.

■ Fig. 1





■Attach a Reflection Paper for Pressure Plate to a junk Pressure Plate. And hold them at the camera back on film plane.

Frame Position Adjustment

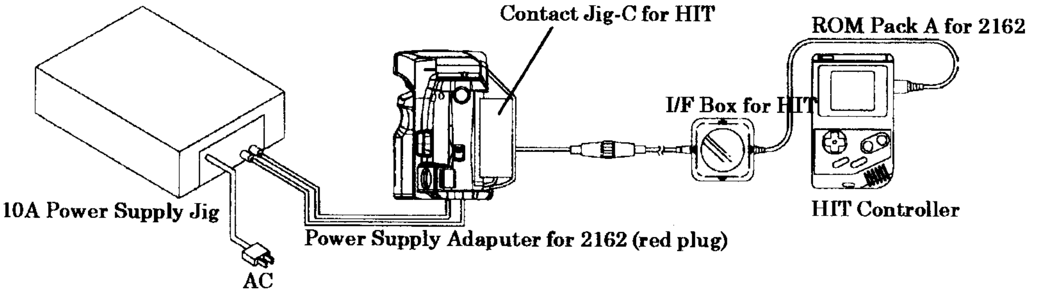
Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
10A Power Supply Jig
Power Supply Adapter for 2162

Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "FRAME ADJ." from the main menu and press SELECT Button.
3. Press SELECT Button again.
4. Press Shutter-Release Button partway down. "COMPLETE" appears when adjustment is complete.
5. Press SELECT Button to return to the main menu.

■ Fig. 1



Date LED Adjustment

Equipment Required

HIT Controller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
IP LED Positioning Jig
Flash Meter-V
Booster-II

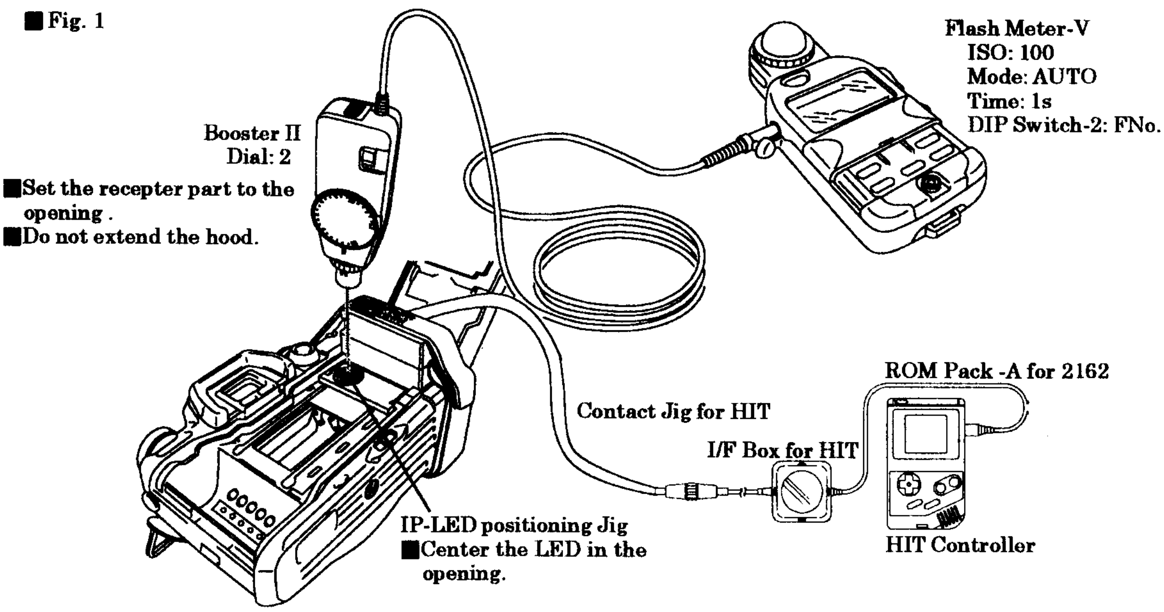
■ Standard

ISO	Standard
100	F45.0±0.5EV
200	F32.4±0.5EV
400	F22.4±0.5EV
800	F16.4±0.5EV

Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "IP-LED ADJ." from the main menu and press SELECT Button.
3. Select "LED ON" from the menu and press SELECT Button again.
4. According to the display, press the shutter-release button partway down (S1 ON).
   The date LED glows.
5. Press the measuring button of the flash meter-V and check the reading.
   If out, adjust the brightness as follows.
6. Select the desired option using Control Pad and press SELECT Button.
   MUCH UP: to increase brightness in large steps.
   MUCH DOWN: to decrease brightness in large steps.
   LITTLE UP: to increase brightness in small steps.
   LITTLE DOWN: to decrease brightness in small steps.
7. Repeat step 3-6 for the present ISO setting until the reading meets the standard above. Then select "GOOD" and press SELECT Button. The next ISO is automatically set.
8. Repeat 3-7 for each of ISO100, 200, 400 and 800 as directed on the display.
   It is unnecessary to change setting of the flash meter-V.
9. After completing adjustment at ISO800, press the shutter-release button partway down.
   "COMPLETE" appears in the screen.
10. Press SELECT Button to return to the main menu.

■ Fig. 1



PI-PR Adjustment

To read output level of sensor devices for aperture (PI2), AF/MF (PR2) and focus (PI1).

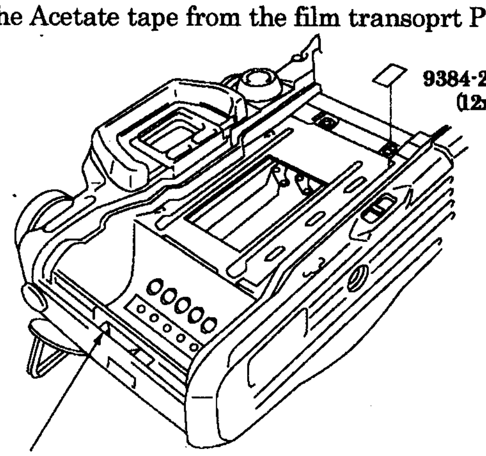
Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
DC Power Supply
Digital Multimeter
Power Supply Adapter for 2162

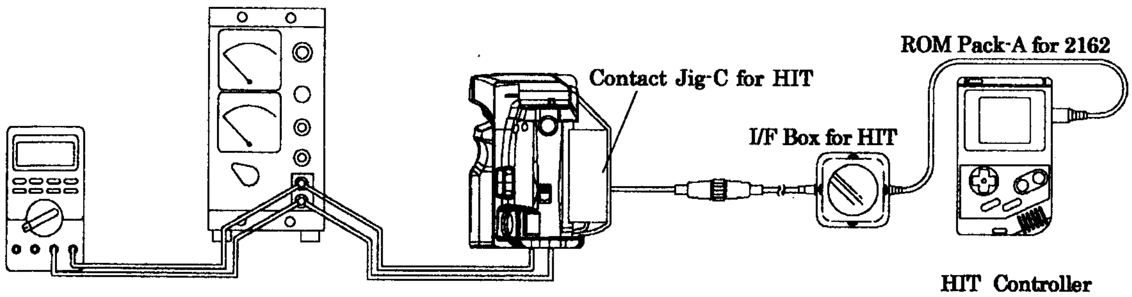
Adjustment

1. While the back cover is opened, insert a tool such as the slotted screwdriver (#2) or the tip of the tweezers to the slot of the back cover lock lever, then push the edge of the back cover lock lecer to switch the back cover status from On to Off.
2. Affix a piece of the Acetate tape (#9284-2391-20) to the film transoprt PR for better light shielding.
3. Set up the equipment as in Fig. 2.
4. Select "PI-PR ADJ." from the main menu and press SELECT Button.
5. Press SELECT Button again.
6. Press Shutter-Release Button partway down.
   The HIT Controller confirms PI2 output, and beeps.
   Press Shutter-Release Button partway down.
   The HIT Controller confirms PR2 output, and beeps.
   Press Shutter-Release Button partway down.
   The HIT Controller confirms PI1 output, and "COMPLETE" appears when the adjustment is complete.
7. Press SELECT Button to return to the main menu.
8. Remove the piece of the Acetate tape from the film transoprt PR.

■Fig.1



■Fig.2



Model Set Adjustment

LIMITED models (2162-091, -250, -650) and CHINESE NAVIGATION model (2162-092) should be performed Model Set Adjustment.
NORMAL models (2162-291, -490, -600) would be skipped Model Set Adjustment.

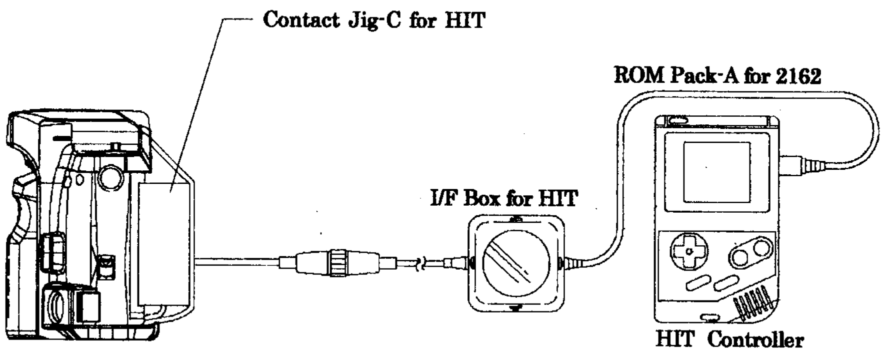
Equipment Required

HIT Contoller
ROM Pack A for 2162
Contact Jig-C for HIT
I/F Box for HIT

Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "Model Set" from the main menu and press SELECT Button.
3. Select the following appropriate variation from the Model Set menu
   Select "ALPHA LIMITED" when camera is Alpha 7 Limited (2162-091, -650).
   Select "DYNAX LIMITED" when camera is Dynax 7 Limited (2162-250).
   Select "ALPHA CHINESE" when camera is Alpha 7 Chinese navigation (2162-092).
4. Press SELECT Button.
5. According to the display, press Shutter-Release Button partway down. "COMPLETE" appears when adjustment is completed.
6. Press SELECT Button to return to the main menu.

■Fig.1



B. C. Lock Voltage Adjustment

Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT
DC power supply
Digital multimeter
Power Supply Adapter for 2162

Adjustment

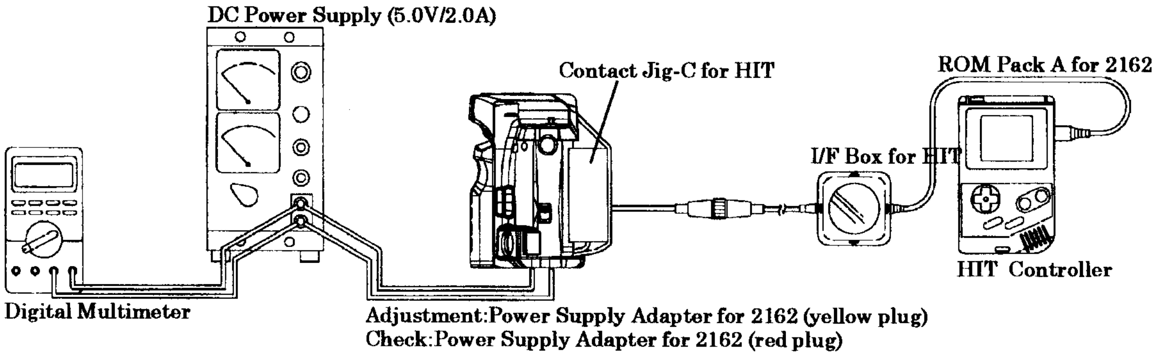
1. Set up the equipment as in Fig. 1.
2. Select "BC-LOCK ADJ." from the main menu and press SELECT Button.
3. Set DC Power Supply to 5.00V, then press SELECT Button.
4. Press and hold Shutter-Release Button partway down until "COMPLETE" appears.
5. Press SELECT Button to return to the main menu.

Check

Check that B.C. lock operates at the voltage below.

Standard	Voltage
Shutter Lock	4.14V, 0.6Ω

■ Fig. 1



Preparation before AF adjustment

Note: After replacing FPC-A, FPC-B, or Mirror Box or its relative parts, always perform adjustment 1 to 4 (pg.65-68)

Precautions

The following items should have been completed before starting AF adjustment.

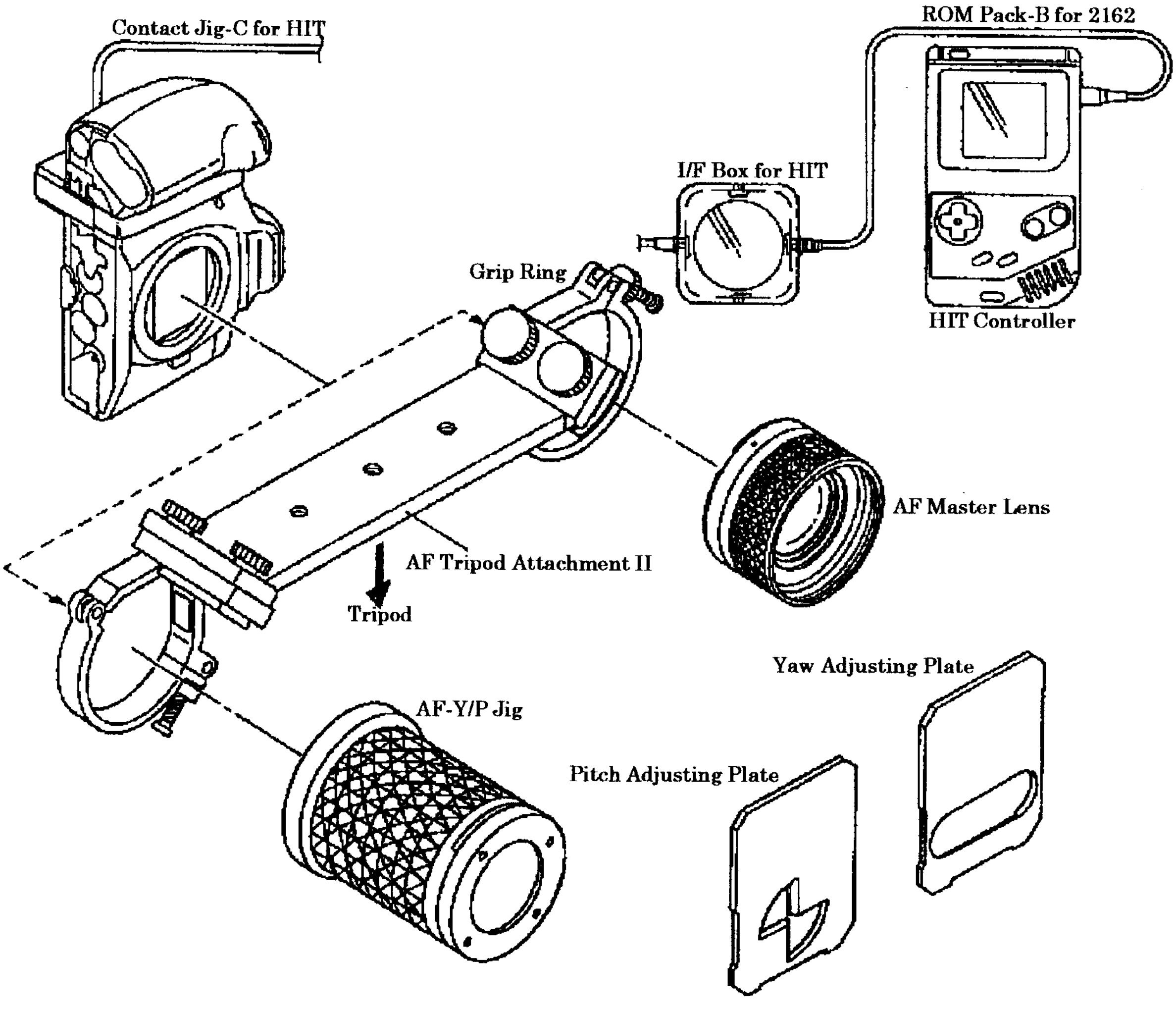
1. Pressure back and viewfinder back check and adjustment.
2. Other external parts than the bottom cover have been installed.
3. When CCD sensor module is out of position after replacing FPC-B, tighten three AF adjusting screws #2658 until they stop, then evenly loosen them by 0.4mm (1.14 turns).

Equipment Required

See the list on pg. 72 for model and jig code.

Master Lens
AF Chart V
AF Chart I for 2162
AF Chart II for 2162
HIT Contoller
ROM Pack B for 2162
Contact Jig-C for HIT
I/F Box for HIT

AF-Y/P Adjuster
AF Tripod Attachment-II
Grip Ring
TORX L Wrench
Hexagon Bar Wrench (1.5)
  or Hexagon Screwdriver
Flood Lamp
  (color temperature of 2800 degrees)



① AF Area Adjustment

CAUTION!
Complete the adjustmnet within 30 sec. after pressing the shutter-release button partway down (S1 ON). Otherwise, the HIT Controller will freeze. If it does, start up the HIT controller again.

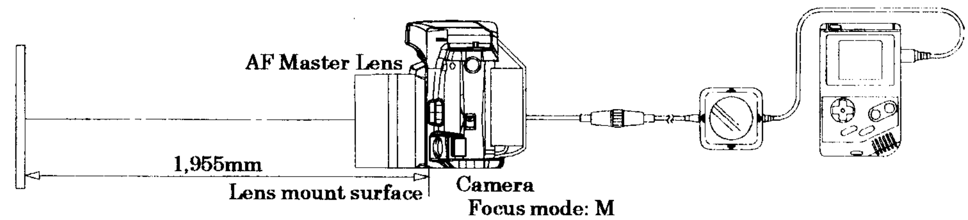
Adjustment

1. Set up the equipment as in Fig. 1.
2. Select "AREA ADJ." from the main menu and press SELECT Button.
3. Press and hold Shutter-Release Button partway down. Lines with two dents and a value appear on the screen and remains for 2 sec.
   Check that each line has two dents like the ones in Fig. 2 and the reading is within the standard. If not, adjust as below.
4. Adjust the sub-mirror position using the hexagon bar wrench as in Fig. 3.
5. Repeat steps-4 and -5 until the reading is within the standard.
6. Press SELECT Button while holding the shutter-release button partway down (S1 ON) to return to the main menu.

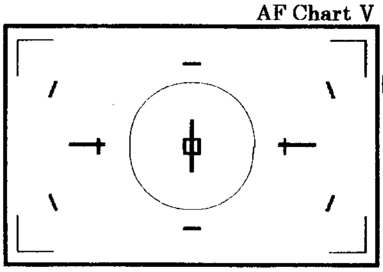
Standard 100+/-4

REPAIR GUIDE

■Fig. 1

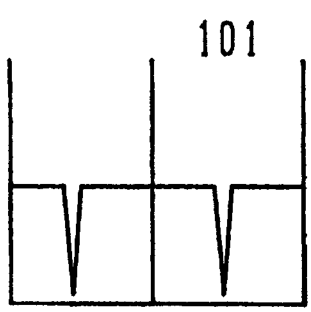


AF Chart V

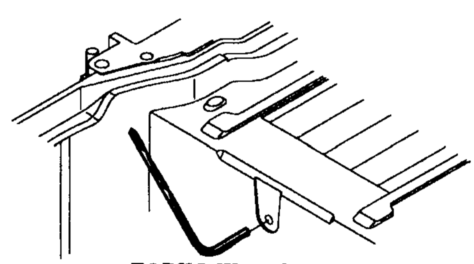


■Align center of each island with the chart.

■Fig. 2



■Fig. 3



② Pitch Yaw Adjustment

CAUTION!
Complete the adjustement within 30 sec. after pressing the shutter-release button partway down (S1 ON). Otherwise, the HIT Controller will freeze. If it does, restart the HIT Controller.

Light up the chart with a flood lamp during Pitch and Yaw adjustment.

Pitch Adjustment

1. Attach AF-Y/P Adjuster to the camera, and set Pitch Adjusting Plate (Fig. 1).
2. Select "PITCH, YAW ADJ." from the main menu and press SELECT Button.
3. Press and hold Shutter-Release Button partway down so that display as Fig. 2 appears.
4. Adjust Pitch Adjusting Screw as in Fig. 4 so that the reading in HIT Controller is within standard. Then go on to Yaw adjustment below.

Yaw Adjustment

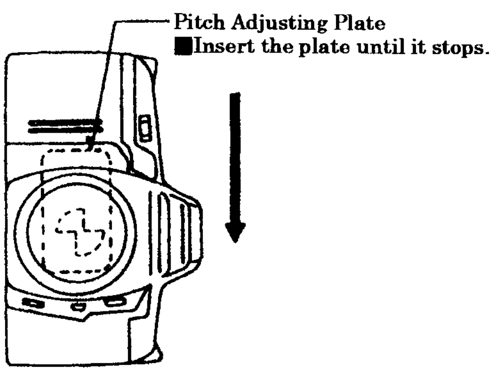
5. Attach AF-Y/P Adjuster to the camera, and set Yaw Adjusting Plate (Fig. 3).
6. Adjust Yaw Adjusting Screw as in Fig. 4 so that the reading in HIT Controller is within standard.
7. Press SELECT Button while holding the shutter-release button partway down (S1 ON) to return to the main menu.

Check

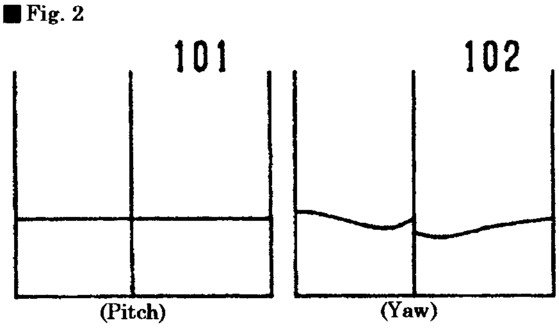
Perform "① AF Area Adjustment" and "② Pitch Yaw Adjustment" repeatedly until all readings meet the respective standard.

Item	Standard
Pitch	072 - 139
Yaw	077 - 130

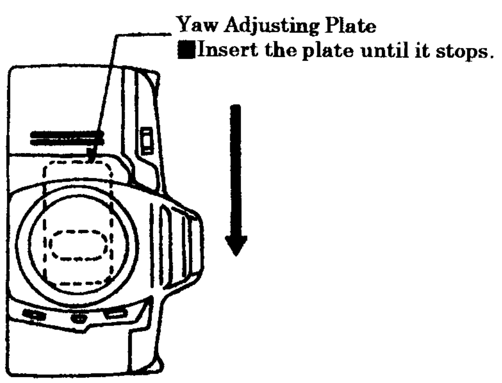
■ Fig. 1



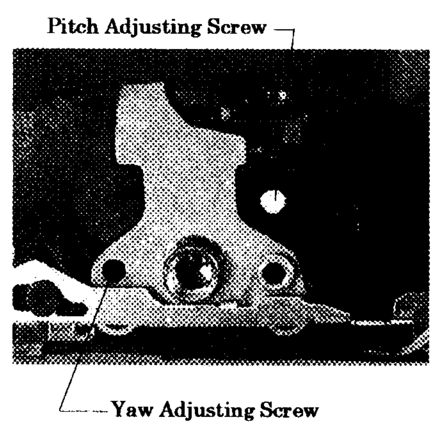
■ Fig. 2



■ Fig. 3



■ Fig. 4



③ EZ Check

CAUTION!
Complete the check within 30 sec. after pressing the shutter-release button partway down (S1 ON). Otherwise, the HIT Controller will freeze. If it does, restart the HIT Controller.

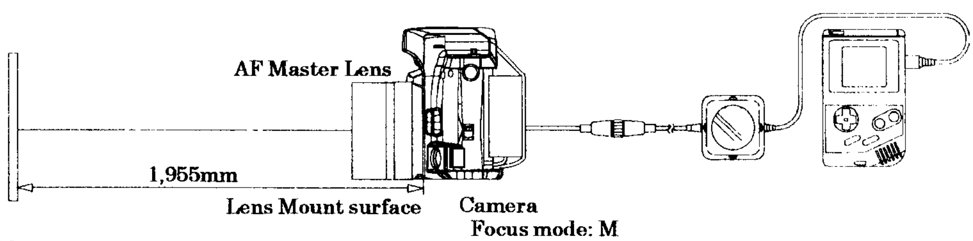
Check

1. Set up the equipment as in Fig. 1.
2. Select "EZ CHECK" from the main menu and press SELECT Button.
3. Select the desired island group from EZ CHECK menu and press SELECT Button.
4. Looking through the viewfinder, align the focus frame with the measuring point on the appropriate chart according to the table below.
5. Press SELECT Button.
6. Press the Shutter-release Button partway down (S1 ON) then release the button (S1 OFF). Repeat S1 ON/OFF 4 times.
   The HIT controller beeps, and the reading appears on the screen for 3 sec.
7. Confirm the reading is within the standard. Repeat step 3 to 6 for other island groups if necessary.
8. Select "MENU" and press SELECT Button to return to the previous menu.

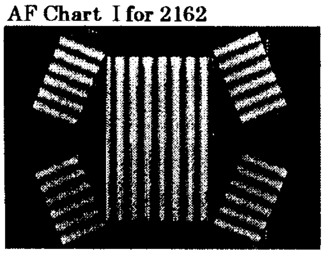
Island Group		Chart	Measurement point
1, 11	ISLAND	AF Chart-I for 2162 (Horizontal)	A
4, 5, 9	ISLAND	AF Chart-I for 2162 (Horizontal)	E
2, 12	ISLAND	AF Chart-I for 2162 (Horizontal)	I
3, 6, 10	ISLAND	AF Chart-I for 2162 (Vertical)	M
8	ISLAND	AF Chart-II for 2162 (Horizontal)	Q
7	ISLAND	AF Chart-II for 2162 (Vertical)	U

Standard 0+/-50

■ **Fig. 1**



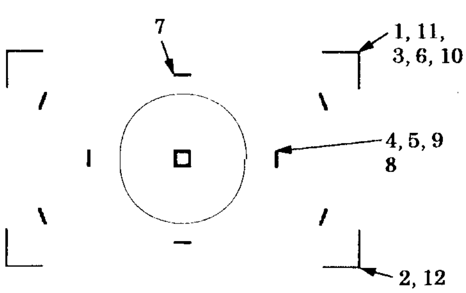
AF Chart I for 2162



AF Chart II for 2162



■ **Fig. 2**
■ **Island Group Layout**



④ EZ Adjustment

CAUTION!
Complete the adjustment within 30 sec. after pressing the shutter-release button partway down (S1 ON). Otherwise, the HIT Controller will freeze. If it does, restart the HIT Controller.

In general (after FPC replacement or CCD removal), perform adjustment for all island groups in series according to the display. Do not quit the adjustment midway. When necessary, a single item is selectable at option.

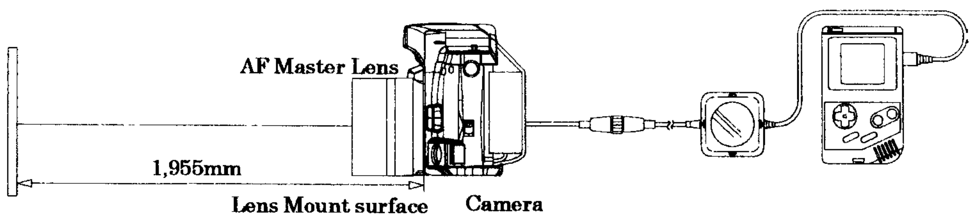
If ERROR (communication failure with HIT) occurs during adjustment, start over from the item that has been interrupted. It is unnecessary to start back to the beginning.

Adjustment

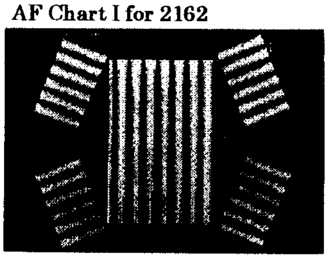
1. Set up the equipment as in Fig. 1.
2. Select "EZ ADJ." from the main menu and press SELECT Button. EZ ADJ menu appears on the screen with "1, 11 ISLAND" in the black box.
3. Press SELECT button.
4. Align the focus frame with the measuring point on the appropriate chart, then press SELECT Button. (Fig. 2)
5. According to the display, turn S1 ON/OFF 4 times. The HIT Controller beeps, then "S1 ON" appears in the display.
6. According to the display, turn S1 ON repeatedly until "OK" or "COMPLETE" (ISLAND 7) appears.
7. Press SELECT Button. The display is replaced with the EZ ADJ menu, and the next island group appears in the black box.
8. Repeat step 3-7 until "COMPLETE" appears.
9. Press SELECT Button to return to the previous menu.

Island Group		Chart	Measurement point
1, 11	ISLAND	AF Chart-I for 2162 (Horizontal)	A - D
4, 5, 9	ISLAND	AF Chart-I for 2162 (Horizontal)	E - H
2, 12	ISLAND	AF Chart-I for 2162 (Horizontal)	I - L
3, 6, 10	ISLAND	AF Chart-I for 2162 (Vertical)	M - P
8	ISLAND	AF Chart-II for 2162 (Horizontal)	Q - T
7	ISLAND	AF Chart-II for 2162 (Vertical)	U - X

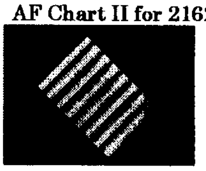
■Fig. 1



AF Chart I for 2162

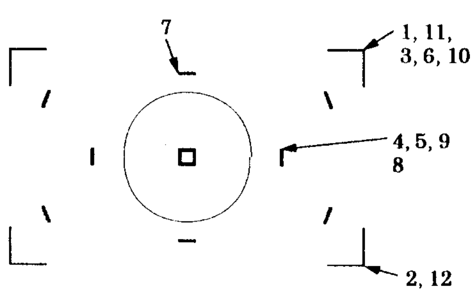


AF Chart II for 2162



■Fig. 2

■Island Group Layout



REPAIR GUIDE

Assist Mode

The following 5 assistant items are available with ROM Pack A for 2162.

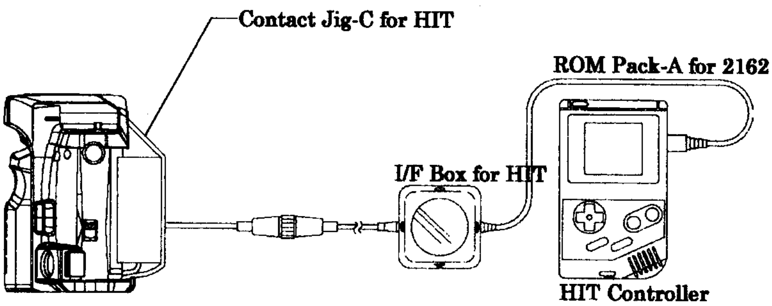
DATA COPY
TROUBLE CODE
FLASH CHARGE ON/OFF
MATTE TYPE SET
OPENING DISPLAY SET

ASSIST MODE
DATA COPY
TROUBLE CODE
FLASH CHARGE ON/OFF
MATTE TYPE SET
OPENING DISPLAY SET
MENU

Preparation

1. Set up the equipment as in Fig. 1.
2. Select "ASSIST MODE" from the main menu and press SELECT Button.
   Assist mode menu appears in the display.

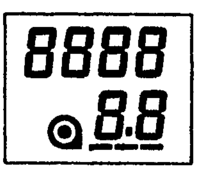
■ Fig. 1

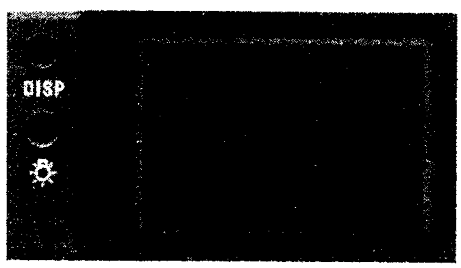


LCD Displays Check

Check

Slide Main Switch to ON. Pressing and holding Manual-Rewind Button, re-instal batteries.
To resume normal display, turn the camera off/on or re-install the batteries again







Data copy

Keep the HIT controller activated until the whole copying procedure is complete. Otherwise, the data stored in the HIT CONtroller is erased.
Before starting data copy, check the battery capacity of the HIT Controller, and replace batteries with fresh ones if necessary.

Equipment Required

HIT Contoller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT

Data Copy

Never turn HIT Controller off during data copy procedure.

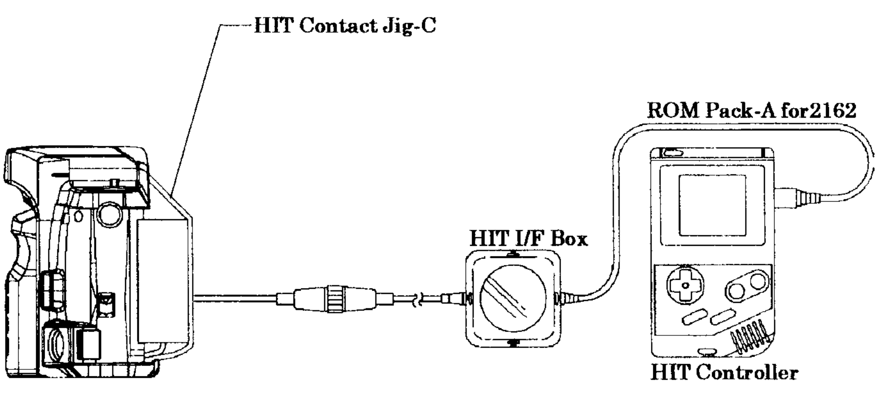
Read-out from original FPC-A (before removing FPC-A)

1. Set up the equipment as in Fig. 1.
2. Select "ASSIST MODE" from the main menu and press SELECT Button.
3. Select "DATA COPY" from ASSIST MODE menu and press SELECT Button.
4. Select "READ" from the menu and press SELECT Button.
5. Press Shutter-Release Button partway down. "DATA STORED" appears when data copy to HIT Controller is completed.

Write-in to new FPC-A (after installing new FPC-A)

1. Select "WRITE" from the menu and press SELECT Button.
2. Press Shutter-Release Button partway down. "COMPLETE" appears when the data download is complete.
3. Select "MENU" and press SELECT Button to return to ASSIST MODE menu.

■ Fig. 1



Error Code on HIT Controller

Error code list

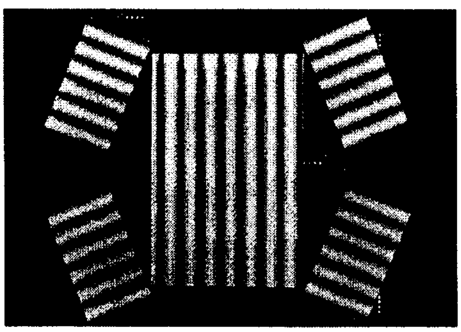
Item	Error code	Meaning	Cause
BC lock voltage adjustment	10	A/D conversion reading at battery check is incorrect	Voltage is wrongly set. Resistance of Power Supply Adapter is defective. Resistor for BC dummy current is defective. Faulty transistor
AE adjustment	21	Little difference between EV6 and EV15.	Luminance is wrongly set. SPC1 is disconnected.
Manual set SS adjustment	28	Out of adjustable range; Input value is out of adjustable range	Defective Shutter Assy
Flash SPC level adjustment/ Flash level adjustment	30	Flash level is incorrect.	Luminance is wrongly set. SPC2 is disconnected. Reflection Paper isn't set. Aperture mechanism is defective.
Aperture preset adjustment	50	Aperture pulse doesn't change	Defective Aperture Baseplate Assy
EZ adjustment	61	Low contrast	Chart is out of position Chart is too close/far. CCD is defective.

Measuring Instruments, Tools and Jigs

Luminance Box <Model L-2101, L-2111, *L-222, *L-223>
EE Tester <Model EE-2101, EE-2111>
Shutter Tester <Model S-2201, S-2101>
1000mm Collimator <Model RC- III ,* II ,* I >
Digital Multimeter <FLUKE 83>
DC Power Supply <MTR18-2>
Camera Leak Tester <CL-1101, CL-1201>
Strobe Tester <ST- V ,* IV ,* III >
Flash Meter <FM- V >
Booster <BOOSTER- II >
Remote Cord <RC-1000>
PROGRAM (MAXXUM) FLASH Xi series
Mirror Remover <2071-5806-75>
Master Lens <2072-0001-75>
AF Tripod Attachment II <2072-0003-76>
AF Master Lens <2072-0006-75>
Mirror Positioner <2072-5151-75>
AF-Y/P Adjuster <2076-0006-75>
AF Chart V <2082-0004-75>
SPC Chart <2082-0004-75>
10A Power Supply jig <2082-0006-75>
AF Chart I for 2162 <2162-0001-75>
AF Chart II for 2162 <2162-0002-75>
IP-LED Positioner <2162-0003-75>
Sync Cord <7981-101311>
or Multi-Camera Tester <7981-1025-01>
Power Supply Adapter for 2162 <7981-1018-79>
AEF Signal Adapter IV <7981-2014-34>
Reflection Paper <7981-3001-51>
Reflection Paper for Pressure Plate <7981-3001-51>
HIT Controller <7981-5001-01>
HIT I/O Tester <7981-5001-03>
HIT Contact Jig-C <7981-5001-13>
HIT I/F Box <7981-5001-33>
ROM Pack-A for 2162 <7981-5002-40>
ROM Pack-B for 2162 <7981-5002-41>
Dial Gauge <7982-2001-11>
Body Back Gauge <7982-2002-01>
Body Back Flat Plate-A <7982-2004-01>
Grip Ring <7983-9004-01>
TORX L Wrench (T8) <7983-1032-01>
Hexagon Screwdriver <7983-1040-01>
Discharger II <7983-9005-01>
Hexagon Bar Wrench (1.5)
Flood Lamp (Color temperature of 2800° K)
Film (Kodacolor gold 100 Color negative film: Exposed indoor for 24 hours or longer)

*: Production ceased.

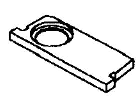
■AF Chart I for 2162 <2162-0001-75>



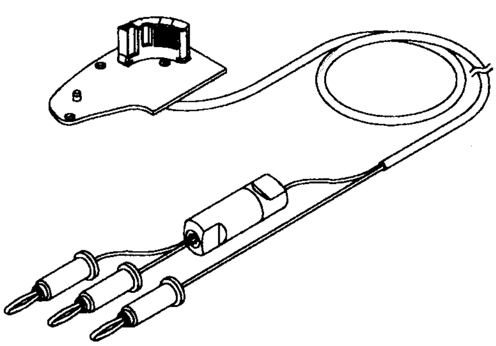
■AF Chart II for 2162 <2162-0002-75>



■IP-LED Positioner <2162-0003-75>



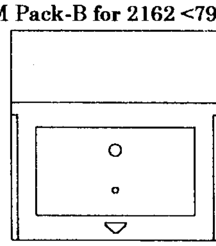
■Power Supply Adapter for 2162 <7981-1018-79>



■Reflection Paper for Pressure Plate <7981-3001-53>



■ROM Pack-A for 2162 <7981-5002-40>
■ROM Pack-B for 2162 <7981-5002-41>



Subsidiary Materials

Grease

G-45 <7984-1045-01>
G-85 <7984-1085-01>
G-115 <7984-1115-01>

Adhesive

B-10 <7984-2010-01>
B-20 <7984-2020-01>
B-50 <7984-2050-01>
B-60 <7984-2060-01>

CHECK LIST

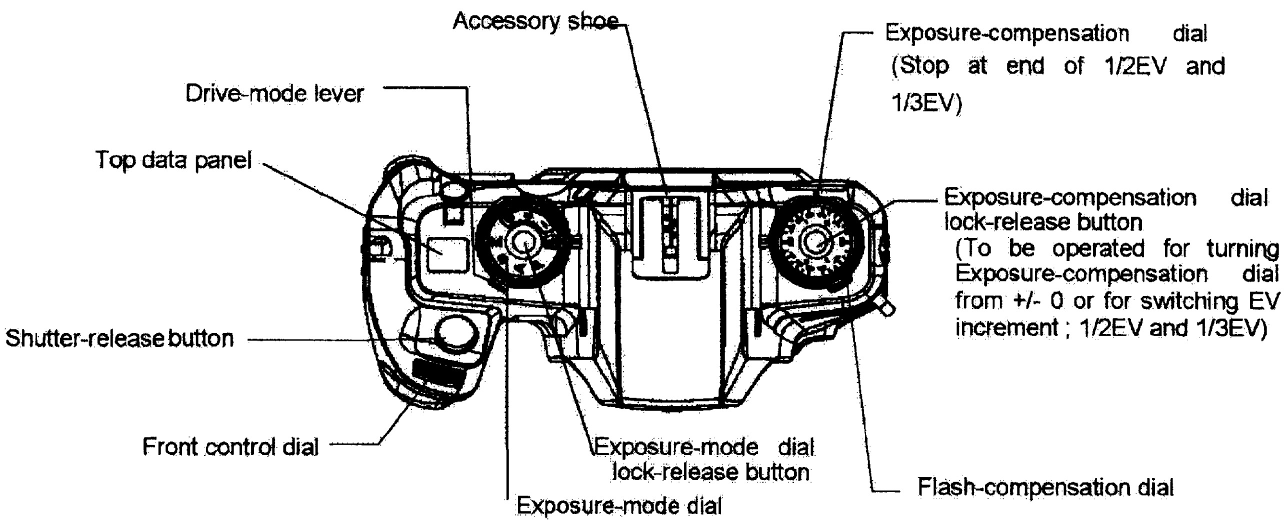
1. This Check List describes the quality of operation warranted to general users. When users inquire about quality or request inspection, refer to this Check List. Use this list also when checking operation after repair.
2. When using this list at shipping or receiving inspection, judge the quality according to the purpose of the inspection, not by directly referring to this level.
3. For individual taste or special usage, some users may not be satisfied with this level of quality and will request a different one.
   In such cases, adjust the level as required by them as much as possible.
4. Checking items that are characterized as sensory test are not included in this section. Adjust those items according to the product itself or user's request.

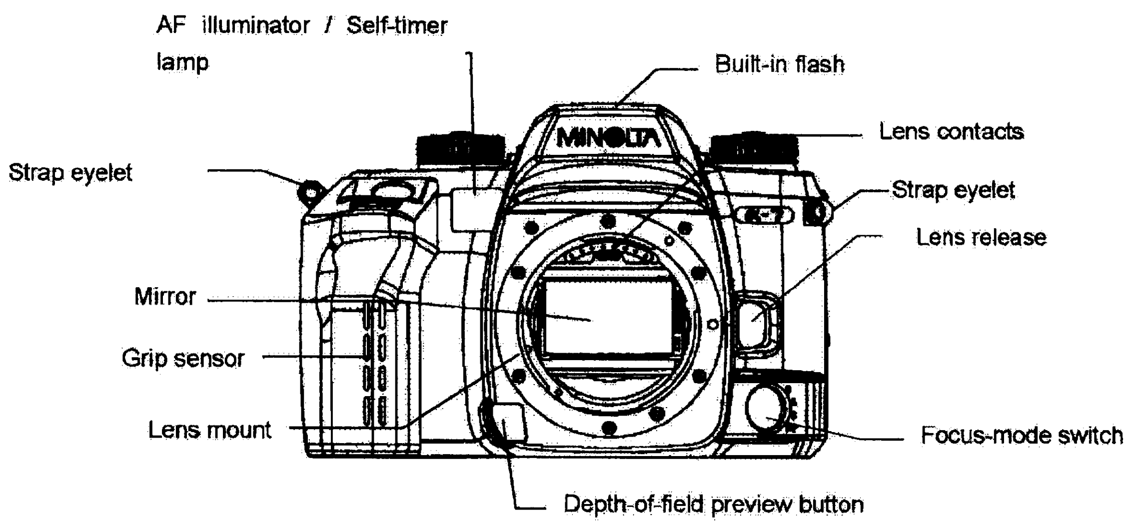
Table of Contents

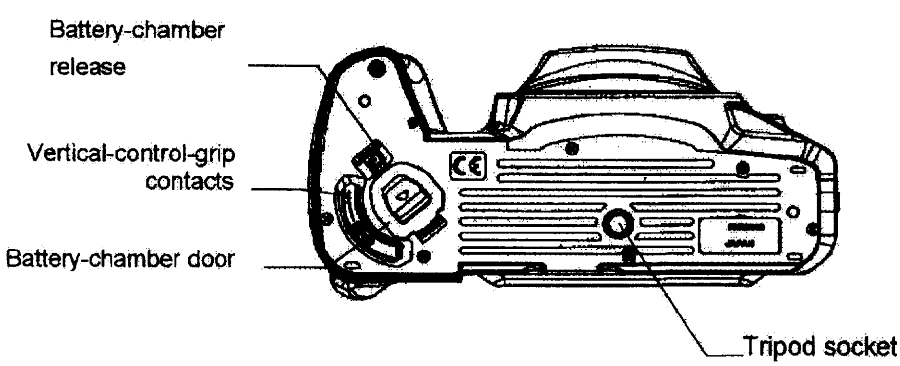
(2162) A 2

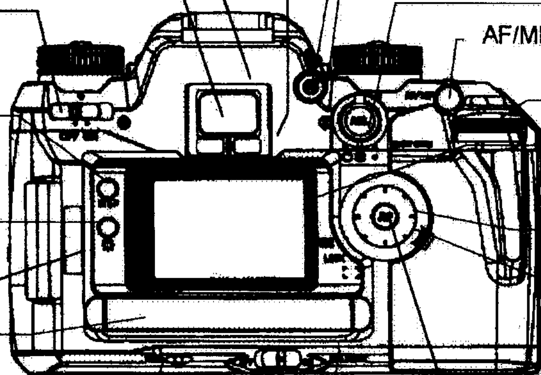
Name of Parts

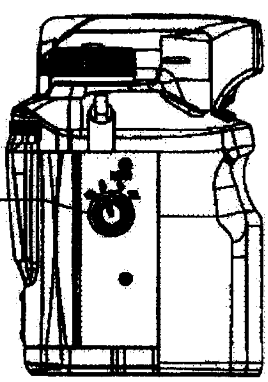
Body

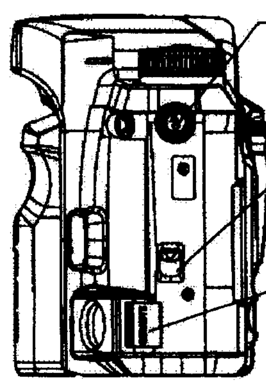


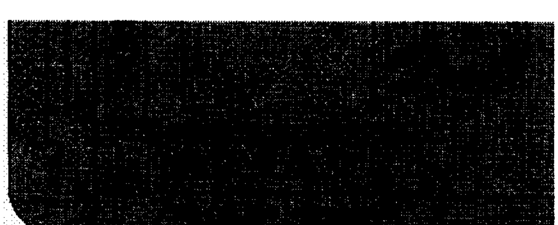





Eyepiece sensor
Eyepiece cup
Viewfinder
Main switch
(OFF, ON)
Display-selection button
Navigation-display
illuminator
Film window
Control-panel door
Manual-rewind button
Eye-start switch
Dioptor-adjustment dial
Metering-mode switch
AE-lock button
AF/MF control button
Rear control dial
Navigation display
Focus-area selector
Wide/ Local focus-area switch (to be locked)
Spot-AF button

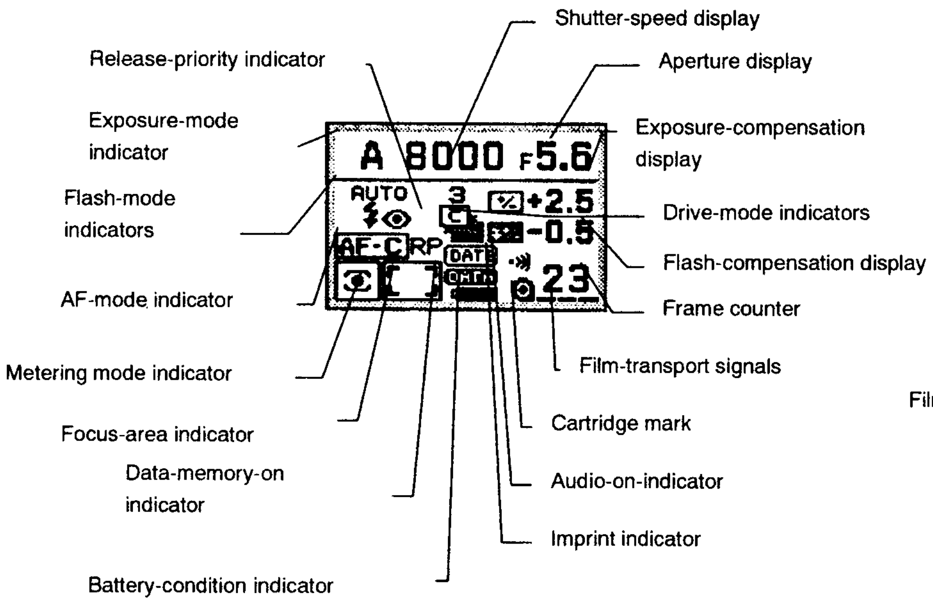

Flash-mode switch

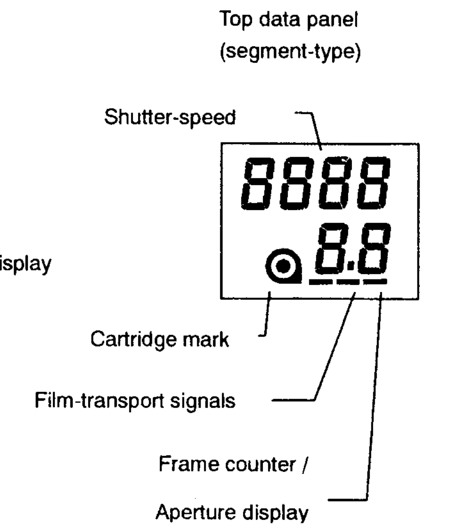

PC terminal
Back-cover release
Remote-control
terminal


Data-memory button
ISO button
Date button
Adjust button
Enter button
Custom button

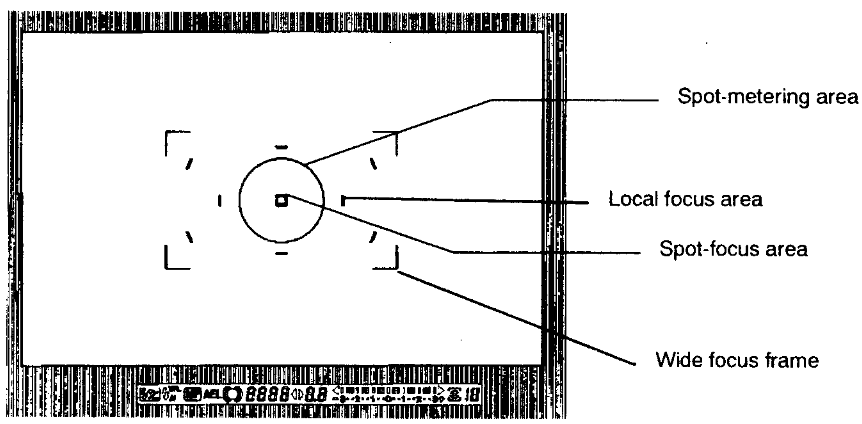
(2162) A 4

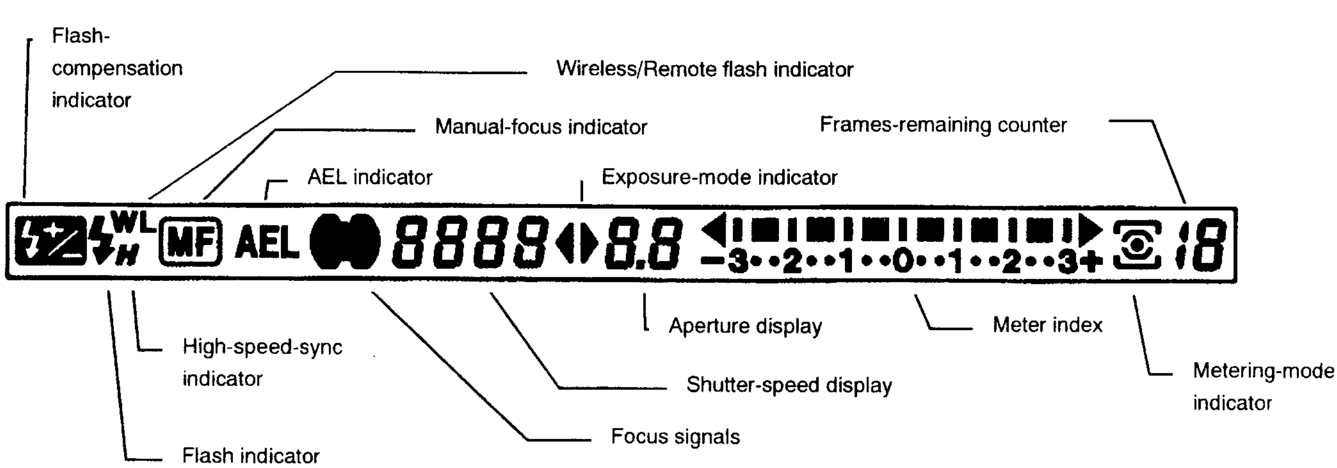
Display & Panel





CHECK LIST





Custom Functions

Custom Function Table

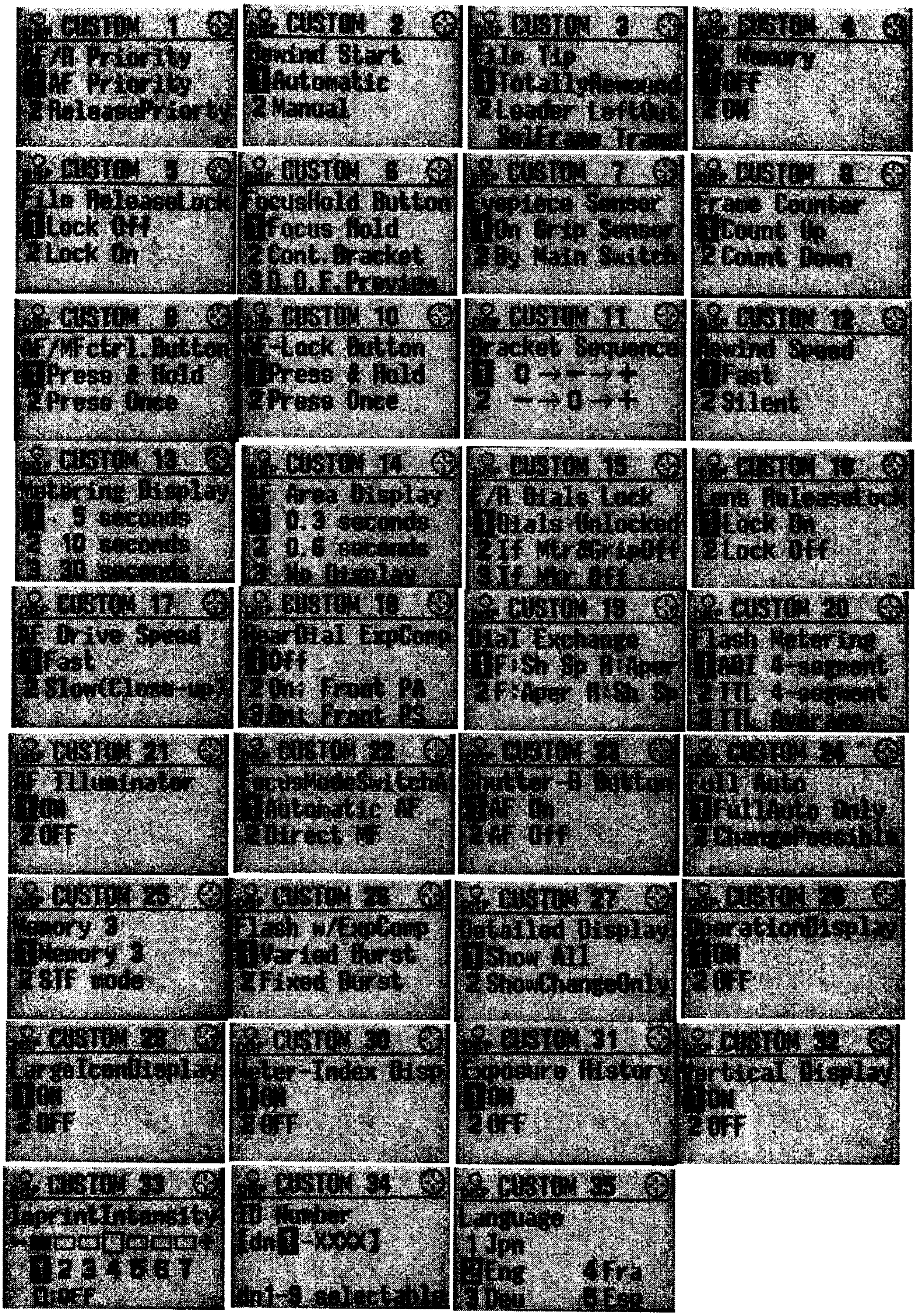
Function Number	Control	Action		Default settings
Custom1	AF priority / Shutter-release priority	1	AF priority (AFP)	#
		2	Release priority (RP)	
Custom2	Film rewind start	1	Automatic	#
		2	Manual	
Custom3	Film tip	1	Completely Rewound into cartridge	#
		2	Left out of cartridge for Select-frame film transport function	
Custom4	DX memory	1	Off	#
		2	On	
Custom5	Shutter-release lock when the film is not in the chamber	1	Released	#
		2	Locked	
Custom6	Lens focus-hold button	1	Focus hold	#
		2	Continuous advance bracketing	
		3	Depth-of-field preview	
Custom7	Eyepiece sensor activation	1	By Main switch and Grip sensor	#
		2	By main switch only	
Custom8	Frame counter	1	Count up	#
		2	Count down	
Custom9	AF / MF control button	1	MF while the button is pressed down in AF AF activated while the button is pressed down in MF	#
		2	MF with a push of the button in AF Returns to AF with another push of the button AF is selected (~~not~~ activated) with a push of the button in MF, returns to MF when the focus is locked	
Custom10	AE-lock button	1	Activated while the button is pressed down	#
		2	Activated after the button is pressed, Canceled by pressing the button again	
Custom11	Exposure bracketing / Flash-bracketing sequence	1	Metered exposure, -, +	#
		2	-, Metered exposure, +	
Custom12	Film rewind speed	1	Fast	#
		2	Slow (silent)	
Custom13	The display duration of exposure settings (aperture and shutter speed) in the Top data panel and Viewfinder	1	5 s	#
		2	10s	
		3	30s	
Custom14	Local focus area in the Viewfinder screen	1	Always appears at focus lock (approx. 0.3 s)	#
		2	Always appears at focus lock (approx. 0.6 s)	
		3	Appears only when Focus-area selector is pressed	
Custom15	Front and Rear control dial Lock	1	Always inactive	#
		2	Locked when the camera is not metering and when the grip sensor is not tripped	
		3	Locked only when not metering	
Custom16	The Shutter-release lock when the lens unattached	1	Locked	#
		2	Released	
Custom17	AF Drive speed	1	Fast (speed priority)	#
		2	Slow (for close-up subjects or low lighting conditions)	

CHECK LIST

Function Number	Control	Action		Default settings
Custom18	Exposure compensation control with Rear control dial in P, A, and S mode	1	Not available	#
		2	Yes (Front control dial in P mode : PA)	
		3	Yes (Front control dial in P mode : PS)	
Custom19	Front and Rear control dial - Exchanged Control	1	No	#
		2	Yes	
Custom20	Flash-metering	1	ADI 4-segment	#
		2	TTL 4-segment	
		3	TTL average	
Custom21	AF Illuminator	1	On, fires if necessary	#
		2	Off	
Custom22	Tasking on Focus-mode switch - AF-A position	1	Automatic AF mode (AF-A)	#
		2	DMF mode	
Custom23	AF function of the Shutter-release button	1	On	#
		2	Off	
Custom24	Full-auto mode of the Exposure-mode dial	1	Operation after reset not acceptable	#
		2	Operation after reset acceptable	
Custom25	Tasking on Exposure-mode dial - position '3'	1	Memory 3	#
		2	STF mode	
Custom26	Influence of Exposure compensation on flash-metering	1	Influence on flash-metering	#
		2	Not influence on flash-metering	
Custom27	Detailed display	1	Show all settings	#
		2	Show changes from Full-auto settings only	
Custom28	Operation display	1	On	#
		2	Off	
Custom29	Large-icon display	1	On	#
		2	Off	
Custom30	Meter index display	1	Shown in both the viewfinder and the navigation display	#
		2	Shown in the viewfinder alone	
Custom31	Exposure history display	1	On	#
		2	Off	
Custom32	Vertical display	1	On, Changes orientation accordingly	
		2	Off, Remains in the horizontal orientation.	
Custom33	Imprint Intensity	1-3	Low intensity	
		4	Standard	#
		5-7	High intensity	
Custom34	Camera ID number	Changes Camera ID number from 1 to 9 Default : 1 (dn1-xxxx)		
Custom35 (#2162-091, -250, -291, -490, -600, -650)	Language	1	Japanese (Jpn)	Depending on the destination
		2	English (Eng)	
		3	German (Deu)	
		4	French (Fra)	
		5	Spanish (Esp)	
Custom35 (#2162-092)	Language	1	Chinese	#
		2	English	
		3	Japanese	

CHECK LIST

Custom Function Display



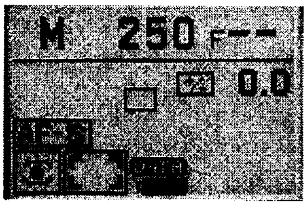
CHECK LIST

(2162) A 8

Standard Setting

Navigation Display

The navigation display shows Detailed display, Large icon display, Meter-index display and Exposure-history display selectable by use of the display-selection button or the custom function setting. Unless otherwise specified, checking procedure in this check list corresponds to the Detailed display.



Camera Setting

The following is a standard camera setting for this check list.

-Lens: None
-Film: Unloaded
-Battery: Installed
-Exposure-mode dial: M (SS: 1/250)
-Drive-mode lever: ☐ Single-frame advance
-Exposure-compensation dial: 0
-Flash-compensation dial: 0
-Custom function setting: None
-Metering-mode switch: 14-segment honeycomb-pattern metering
-Flash-mode switch: Red-eye reduction
-Wide/local focus-area switch: Wide
-Eye-start switch: OFF
-Focus-mode switch: S

Controls & Operations

Main Switch

OFF → ON

- The navigation display is turned on.
- The top data panel is turned on.

Lens Operation (Lens Reset)

- Aperture is reset for all kinds of lens.

AF mode

-Non-xi lens: Set to a specific focus position after infinity-reset.
-Xi lens: Set to the default position after wide-end reset.

MF mode

-Non-xi lens: No focus lens reset and keep MF setting.
-Xi lens: Wide-end reset but keep MF setting.

Opening screens (Limited model only)

- Two opening screens appear.
- The first screen displays the particular logo for limited model (e.g "Dynax 7 Limited").
- The second screen displays information about film and camera use for approx. 7 seconds.
- When displayed, pressing any button on the camera can close the opening screens.

ON → OFF

- The navigation display and the top data panel are turned off.
- In Bulb or 2-sec. self-timer mode, the operation is kept until shutter release is complete.
- The navigation display and the top data panel are both turned off when the shutter release is finished.

Lens Operation

AF mode

-Non-xi lens: Infinity-reset
-Xi lens: Lens retracts to the minimum length.

MF mode

-Non-xi lens: Infinity-reset is not conducted.
-Xi lens: Lens retracts to the minimum length.

Closing screens (Limited model only)

- A screen displays the day's film use for a 24-hour period (00:00:00 to 23:59:59) for 3 seconds.
- Then, the screen is replaced with the Minolta logo
- If the date has not been set in the camera, the closing screen will not appear.

Top Data Panel

Main Switch: OFF

- Frame counter (not displayed when film is not loaded.)

Main Switch: ON

- Shutter-speed, aperture

Navigation Display

Display-selection Button

- Pressing the display-selection button causes the display to change in order, Detailed display, Large icon display, Meter-index display, and Exposure-history display at each time.

Display Contrast Adjustment

- Pressing the display-selection button for 3 sec or longer makes "Contrast Set" display appear. Then turning the front/rear control dial adjusts the display contrast.

Vertical Display

- The orientation of the navigation display for the detailed display and the large icon display is automatically changed to a vertical one when the camera is vertically positioned with SW.1 ON.
- The display orientation does not change when the other displays are selected.

Navigation Display Illuminator

ON

- Illumination continues as long as the button (Navigation display illuminator) is pressed and held.
- Pressing the button turns the illuminator on, and pressing the second time turns it off.
- The illuminator is turned off 5 sec after the last camera operation.

Eye-start Switch

ON

- Holding the grip and bringing the camera to eye level activates focusing and metering. (When a lens is not attached, "MF" is indicated in the viewfinder data panel.)

(Lens: attached, Focus mode: S, A, C)

- The AF mode is always the continuous AF regardless of the focus-mode switch setting when the eye-start is active.

OFF

- Holding the grip and bringing the camera to eye level does not activate focusing nor metering.

Eye Sensor

- The eye sensor detects an object located 3.5cm or less away, and does not detect an object located 6.5cm or more away.

Shutter-release Button

SW.1

(Lens: attached)

- Pressing the shutter-release button partway down (SW1 ON) activates focusing and metering.
- The metered value is indicated in the top data panel and the viewfinder data panel.
- The metering indicator appears in the viewfinder data panel.
- It is indicated whether the subject in the frame is in or out of focus in the viewfinder data panel.

SW. 2

- Pressing the shutter-release button all-the-way down(SW2 ON) releases the shutter and advances the film.(Film: loaded)
- The shutter is released but the film is not advanced.(Film: Not loaded)

Front Control Dial

Exposure mode: S, M, or PS

- Turning the front control dial selects the shutter speed.

Exposure mode: A (with a lens attached)

- Turning the front control dial selects the aperture.

Rear Control Dial

Exposure mode: S

- Turning the rear control dial selects the shutter speed.

Exposure mode: A, M, or PA (with a lens attached)

- Turning the rear control dial selects the aperture.

Exposure-mode Dial

Exposure-mode Dial Lock

- The exposure-mode dial is locked unless the exposure-mode dial lock-release button is pressed.

Lock Release

- While the exposure-mode dial lock-release button is being pressed and held, all the indication other than the exposure mode, the shutter-speed, and the aperture in the navigation display disappear.
- Pressing the exposure-mode dial lock-release button locks the drive-mode lever.
- The exposure-mode dial turns clockwise and counterclockwise either.
- Turning the exposure-mode dial selects an exposure mode among P, A, M, S, memory (1, 2, 3), and full-auto.

Exposure Mode

(A lens must be attached to the body when confirming the following action.)

P Mode

- Turning Sw.1 ON makes the shutter and aperture displays appear. The shutter speed and aperture settings are automatically selected so that the optimum exposure is achieved.

(PA Mode)

- Turning the rear control dial selects the aperture.
- The optimum shutter speed is accordingly selected within the control range.

(PS Mode)

- Turning the front control dial selects the shutter-speed.
- The optimum aperture is accordingly selected within the control range.

A Mode

- The aperture display always appears in the top data panel and the navigation display.
- Turning the front/rear control dial selects the aperture.
- Turning Sw. 1 ON selects and displays the shutter speed corresponding to the selected aperture.

S Mode

- The shutter-speed display always appears in the navigation display and the top data panel.
- Turning the front/rear control dial selects the shutter-speed.
- Turning Sw. 1 ON selects and displays the aperture corresponding to the selected shutter speed.

M Mode

- The shutter-speed and the aperture displays always appear in the navigation display and the top data panel.
- Turning the front control dial selects the shutter-speed, the rear control dial selects the aperture.
- Turning Sw. 1 ON indicates the difference between the manual setting and the optimum exposure at the meter index.

(2162) A 12

Full-auto Mode

- Once selected, the camera settings are as below, and changes made subsequently are not accepted.

Camera Setting In Full-auto Focus Mode

-Exposure-mode: Program(P)
-Metering mode: 14-segment honeycomb-pattern
-Built in flash: Automatic flash (Pre-flash for red-eye reduction fires in accordance with the position of the flash-mode switch.)
-Focus mode: AF-A (Automatic autofocus)
-AF area: Wide focus area
-Drive-mode: Single-frame advance
-Exposure-compensation: +/-0.0EV
-Flash-compensation: +/-0.0EV
-PA/PS creative program mode: Cleared (PA and PS are inactive.)
-AFP/RP: AFP
Flash metering method: 4-segment metering

Effective Operation In Full-auto Focus Mode

-Shutter release
-Flash ON/OFF
-Manual rewind
-Data memory
-Date and time imprinting
-Audio ON/OFF
-Eye-start ON/OFF
-Custom function setting except for 1-2, 20-2, 20-3, 21-2, 22-2, and 23-2

Memory

Function Settings To Be Stored

-Shutter-speed in S mode
-Aperture in A mode
-Shutter-speed and aperture in M mode
-Drive-mode
-Exposure-compensation value
-Flash compensation value
-Metering mode
-Focus mode
-Focus area
-Flash mode
-AFP/RP

Enter Button

- Pressing the enter button after setting the functions with controls makes "STORING MEMORY" display appear.
- While pressing and holding the enter button, the navigation display shows the settings to be stored.
- Turning the exposure-mode dial to the desired memory position 1, 2, or 3, then pressing the enter button again stores the settings.
- When "STF mode" is selected in the custom 25 and is assigned to the memory position 3, the settings can not be stored in the memory position 3.
- The stored function settings are changeable when recalled to the camera operation.

Overwriting Data

- Turning the exposure-more dial to the memory position 1, 2, or 3 recalls the stored function settings, then those settings are possible to be changed by using controls and overwritten in the memory when pressing the enter button.

Flash-mode Switch

- Using the flash-mode switch selects the following modes.
  - -Red-eye reduction
  - -Normal flash
  - -Rear-flash sync
  - -Wireless/remote flash
- Normal flash (Automatic flash in full-auto mode) when the built-in flash is lifted up, pushing it down cancels the flash.

Drive Mode

Drive-mode lever

- Turning the drive-mode lever selects the film drive mode among Single-frame advance, Continuous advance, Bracketing (single or continuous), Self-timer, and Multiple exposure.

Single Exposure Bracketing

Bracket Setting

- Setting the drive-mode lever to the bracketing/single, then pressing the ADJ button in the control panel makes "BRACKET SET" display appear.
  -Front Control Dial: Each click of the front control dial selects the bracket increment in order, 0.3- 0.5- 0.7-1.0EV.
  -Rear Control Dial: Each click of the rear control dial selects the number of frames in a series of the bracket in order, 3-5-7 frames.
  -Exposure-compensation Dial: Each click of the rear control dial shifts bars at the meter index correspondingly toward under/over exposure direction with the bar for the standard exposure value centered on the scale.

Bracketing Operation

- Pressing the shutter-release button exposes frames in a bracket series according to the setting (number of frame in a series, bracket increment).

(Example)

- Indication in the navigation display, the top data panel, and the viewfinder panel changes as following. (Exposure mode: M, Shutter-speed: 1/250, Number of frame in a series: 7 frames, Bracket increment: 1EV)
  -Navigation Display:
  250 → 500 → 125 → 1000 → 60 → 2000 → 30 → 250
  (In the detailed display, counting of the shutter release is also indicated.)
  -Top Data Panel (SW1 OFF):
  br1 → br2 → br3 → br4 → br5 → br6 → br7 → br1
  -Viewfinder Data Panel:
  Corresponding bars " | " at the meter index disappear one by one at each time of shutter release.

Continuous Exposure Bracketing

Initial Setting

- The bracket setting is common in the single and continuous exposure bracketing.

Bracket Setting

- Same as the single exposure bracketing.

Bracketing Operation

- The indication of the shutter-speed continues to change according to the setting in a sequence, 250 → 500 → 125 → 1000 → 60 → 2000 → 30 as long as the shutter release button is pressed and held. (During continuous shutter releases)
- The shutter release stops when the selected number of frame has been exposed.

Interruption of Continuous Bracketing Exposure

- Releasing a finger from the shutter-release button before the series is complete resets the camera to the first frame of the bracket.

(2162) A 14

Flash Bracketing Exposure

- When the film drive mode is set to the bracketing (single, continuous) with a dedicated flash attached or the built-in flash lifted up, the camera is automatically set to Flash bracket mode.
- In the flash bracket mode, pressing the shutter-release button partway down makes "Fbr" appear in the top data panel.
- The bracketing mode remains single exposure even when turning the drive-mode lever to "C" in the flash bracket mode.

Single-frame Advance

- Pressing the shutter release button exposes a single frame. (Does not release the shutter continuously while the button is pressed and held.)

Continuous Advance

Initial Setting

- The drive speed remains as previously set. (Low/High continuous)

Setting

- Pressing the ADJ button in the control panel, then turning the front/rear control dial selects the continuous drive speed. (Low or high)

Low Speed

- Continuous advance at 2fps

High Speed

- Continuous advance at 4fps/MF, 3.7fps/AF-A and AF-C

Self-Timer (10 or 2 sec-delay)

Initial Setting

- The delay time remains as previously set. (10-sec delay or 2-sec delay)

Setting

- Pressing the ADJ button, then turning the front/rear control dial selects the delay time between 10 and 2 sec. (Pressing the shutter-release button partway down enters the selected delay time.)

10-sec Delay

- The shutter is released 10 sec after the shutter release button is pressed.
- The self-timer lamp on the front of the camera starts to blink slowly when pressing the shutter-release button then rapidly 2 sec before the shutter release.

Cancellation

- The 10-sec self-timer is cancelled halfway when the following controls are operated.

  Main switch, Metering-mode switch, Drive-mode lever, Exposure-compensation dial, Flash-compensation dial, Exposure-mode dial, Lens release, Focus-mode switch, Built-in flash UP/DOWN, Flash-mode switch, Wide/Local focus-area switch, Back-cover release (with a film unloaded), Manual-rewind button (with a film loaded)

2-sec Delay

- The mirror pops up when pressing the shutter release button, and 2 sec after the shutter is released.

Cancellation

- The operation can not be canceled halfway once the 2-sec self-timer gets started. (No other operation is accepted until the shutter-release is complete.)

Multiple Exposure

- The exposure can be overlapped repeatedly without a limit.

Counter

- When the exposure mode is set to the multiple exposure, the frame counter in the navigation display changes to "M1" to represent the 1st exposure counted. The number does not exceed 9(M9) even if the shutter release is repeated more than 9 times.
- Pressing the shutter-release button partway down replaces the indication in the frame counter with normal frame number.

Cancellation of Multiple Exposure

- Turning the exposure-mode dial to the other drive mode advances the film and increases the frame counter.

Exposure Data

- The data of each exposure is stored into the exposure-history.

Exposure-compensation Dial

Exposure Compensation

- The exposure is compensated in a range of ±2EV in 1/3EV increment or ± 3EV in 1/ 2EV increment.
- The selected compensation value (EV) appears in the navigation display and the meter index.

Exposure-compensation Dial Lock-release Button

- The exposure-compensation dial is locked when it points to 0 EV, or when it switches the increment scale between 1/2 and 1/3.
- Pressing and holding the exposure-compensation dial lock-release button unlocks the lock to allow the dial to turn.

Flash-compensation Dial

Flash Compensation

- Flash can be compensated in a range of ±2EV in 1/2EV increment.
- When lifting the built-in flash up, the selected compensation value appears in the navigation display and the flash compensation indicator appears in the viewfinder data panel.

AE-lock Button

OFF → ON

- In the exposure mode at P, A, S, or M, pressing the AE lock button starts AE and the displays aperture and SS.
- In the exposure mode at P, A, S, PA, or PS, the metered value is locked.
- Pressing the AE-lock button makes the slow-shutter sync in flash photography.
- In the wireless flash mode, pressing the AE-lock button makes a test burst.
- As long as the exposure is locked, the meter-index shows the EV difference between the locked exposure and the exposure currently metered inside the spot-metering area.

Manual Exposure Setting

- Turning the front control dial while pressing and holding the AE-lock button shifts the shutter-speed and the aperture in a combination.

Metering-mode Switch

- Operating the metering-mode switch selects the metering mode from the following 3 methods.
  -14-segment-honeycomb metering
  -Center-weighted average metering
  -Spot metering
- The navigation display indicates the newly selected metering mode.
- At S0 ON, The icon representing each metering mode appears in the viewfinder.

(2162) A 16

Focus Mode Switch

- Operating the focus-mode switch selects the focus mode among S, A, C, and MF.
  - -C: Continuous autofocus
  - -A: Automatic autofocus
  - -S: Single-shot autofocus
  - -MF: AF coupler remains connected in the MF mode. "MF" is indicated in the navigation display.

Depth-of-field Pre-view Button

- The aperture can be changed and the mirror does not pop up while the pre-view button is pressed and held.

Lens Equipped With The Distance Encoder (D lens)

- While pressing and holding the depth-of-field pre-view button, the depth of field is represented in the navigation display if the magnification is more than 1/60.

Macro Lens Equipped With The Distance Encoder

- The magnification is represented in the navigation display if magnification is more than 1/10.

Lens Release

Lens: Attached (Non-xi lens)

- Pressing the lens release unlocks the lens lock.

MF

- Pressing the spot-AF button and the lens release simultaneously, then releasing fingers in the order of the lens release, the spot-AF button, then the AF coupler is disconnected from the lens. (The indication "MF" appears in a black box.)

AF/MF Control Button

Lens: Attached (Non-xi, non-STF lens)

AF Mode

- The focus-mode is switched to MF while the AF/MF control button is being pressed and held in any AF mode. (The focus-mode switch points to C, A, or S.)
- Releasing a finger from the button resumes AF.

MF mode

- The focus mode is switched to the single-shot autofocus while the focus mode switch is being pressed and held in the MF mode. (The focus-mode switch points to M.)
- Releasing a finger from the button resumes MF.
- The AF/MF button does not function with xi lens nor AF power zoom lens.

Diopter-adjustment Dial

- The adjustment range is from -2.5 to +0.5 diopters.

Wide/Local Focus-area Switch

- Turning the wide/local focus-area switch selects the focus area (wide or local) or LOCK.

Focus-area Selector

(Lens: Attached, Focus mode: S, A, or C)

Wide

- The focus is locked while the focus area selector is pressed and held.

LOCK

- LOCK does not function.

Local

- Operating the focus area selector selects the desired local focus area (sensor). The focus is locked while the selector is being pressed.
- The selected sensor is indicated correspondingly in the navigation display.
- The selected sensor does not change until the other sensor is selected with the focus-area selector or the spot-AF button.

Spot-AF Button

(Lens: Attached, Focus mode: S, A, or C)

Wide

- Pressing the AF-spot button activates the spot (center) focus area and locks focus.

LOCK

- LOCK does not function.

Local

- Pressing the AF-spot button activates the spot (center) focus area and locks focus.
- The spot focus area is indicated correspondingly in the navigation display.

Manual-rewind Button

ON

- Pressing the manual-rewind button starts mid-roll rewind.
- Each time the manual rewind button is pressed during film rewind, the rewind speed changes between Fast and Silent (slow).

PC Terminal

- The PC terminal works compatibly with both center positive and center negative flash unit.
- When using the PC terminal, the rear-flash sync can not be used.

Back Cover Release

- The back cover can not be opened if the film has not been rewound.
- The back cover can be opened if the film has been rewound, or the film is not loaded.

Remote Control Terminal

- The slide cover opens/closes smoothly.
- With the remote cord plugged to the remote control terminal, pressing the remote-release button activates AF and makes shutter release.

Data Memory

Data Memory Button

- The navigation display shows the data memory setting when pressing the data memory button, and using the rear/front control dial or the focus area selector selects ON, OFF, or the film area to be recalled.
- Turning the front/rear control dial, or pressing the focus area selector scrolls through the data memory menu as follows: OFF-ON - Area 1 - Area 2 - ··· Area 7 (Normal model) or Area 18 (Limited and Chinese navigation model) - OFF

ON (Storing data)

Film Loading

- The display indicates the film area, film speed, and the film data number (dn....).

Exposing Data Number

- When the data memory function is ON, the film data number is exposed on "0" frame upon loading the film cartridge into the camera.
- The data number counts up by one at each time of loading a new film.
- The film data number is not exposed when the data memory function is OFF.

- The data number continues to count up even if the data memory function is OFF or the initial load fails.

Data Items To Be Stored

- The following items are stored for each frame.
  -Film data number
  -Date and time
  -Metering mode
  -Shutter speed
  -Aperture
  -Focal length and maximum aperture
  -Exposure compensation
  -Flash compensation
  -Exposure mode
  -Metering area

Film area

- The film area number increases up to 7 (Normal model) or 18 (Limited model) by one at each time of loading a new film.
- The film area number does not increase if the film is rewound and unloaded without taking a picture.
- When the next film is loaded after storing the data into the 7th film area (Normal model) or 18th film area (Limited and Chinese navigation model), the navigation display shows "Data is full and will be overwritten".

Resetting Data Number

- Sliding the main switch to ON while pressing and holding the data memory button resets the last 4 digits of the film data number to 0001.
- The number: "1" of "dn1" represents the body identification number to distinguish the individual camera.

Recalling Data

- Pressing the ADJ button or the spot-AF button after selecting the film area to be recalled makes the stored data indicated in the display.

Data Display Selection

- Pressing the display-selection button switches the data display between a single frame's data (all data) and four frames' data (shutter speed, aperture, and exposure compensation).
- Turning the front/rear control dial or pressing the focus frame selector increases/decreases the frame number by one.
- With 4-frame display, pressing the focus frame selector to the right or left direction scrolls data indication to the previous/next four frames.

Clearing Data

- Pressing the data-memory button and the ADJ button simultaneously makes "DATA CLEAR" display indicated showing "Press [DATA] again to delete all the data.".
- In the data clear mode, pressing the data-memory button deletes the data stored in all of the film areas. (Individual data deletion for each film area is not available.)

ISO Button

ISO Setting

- Pressing the ISO button makes the ISO setting display appear, then turning the front/rear control dial selects ISO sensitivity from ISO 6 to 6400 in 1/3EV increments.
- Automatic Setting Range: ISO 25 to 5000 (1/3EV step)
- Non-DX coded film is set to the previous roll's film speed.

Date Button

ON

- Pressing the date button in the control panel makes "DATE IMPRINT" display appear, then turning the front/rear control dial or pressing the focus selector selects the setting from DATE IMPRINT OFF, DATE IMPRINT, TIME IMPRINT, and TIME IMPRINT OFF.

Date/Time Setting

- "DATE/TIME ADJUST" display appears when pressing the ADJ button after pressing the date button.
- Turning the front control dial or pressing the focus-area selector to the right and left direction selects the setting item.
- Turning the rear control dial or pressing the focus-area selector to the up and down direction adjusts the selected item.

DATE/TIME Format Change

- Pressing and holding the ADJ button for 3 seconds or longer after pressing the date button makes "FORMAT CHANGE" display appear, then the date/time format can be selected among Y/M/D, D/M/Y, and M/D/Y by turning the front/rear control dial.

ADJ Button

- When setting the drive mode to the self-timer, the bracketing, or the continuous advance, pressing the ADJ button makes the setting display appear for each function.

Custom Button

Custom Function Setting

- Pressing the custom button in the control panel makes the custom function setting display appear. Then turning the front control dial or pressing the focus-area selector to the right and left direction selects the custom function to be set from 1 to 35.
- Turning the rear control dial or pressing the focus area selector to the up and down direction selects the setting.
- In the custom setting mode, pressing the display-selection button switches the display between the single display and 15-item display.
- With 15-item display, turning the front dial or pressing up/down direction of the focus area selector scrolls through by each custom function. Pressing right/left direction of the focus area selector scrolls through to the previous/next 5 items.

Vertical-control-grip Contacts Cover

- The cover smoothly slides and securely clicks at the full-open and full-closed position.

(2162) D 20

Key Combination

Key Combination

Main Switch

Initialization of Custom Setting

- Sliding the main switch to ON while pressing and holding the custom button resets all custom functions to the initial settings except for custom 33/Imprint Intensity, custom 34/ID number, and custom 35/Language.

Resetting Data

- Sliding the main switch to ON while pressing and holding the enter button resets all function settings assigned to Memory 1-3 to the default.

Film Chamber Lock Cancellation

- Sliding the main switch to ON while pressing and holding the ISO button and the AE-lock button simultaneously unlocks the safety lock electrically. (Doing the same operation again or opening the back cover resumes the safety lock.)

Data Number Reset

- Sliding the main switch ON while pressing and holding the data-memory button resets the last four digits of the film data number to 0001.

Cancellation of turning off the opening and closing screens (Limited model only)

- Sliding the main switch ON while pressing and holding the display-selection button cancels to active the both opening and closing screens.
- To reactive the screens, simply repeat the procedure.

AE-lock Button

Brightness-Distribution Display

- Pressing the display-selection button while pressing and holding the AE-lock button makes the brightness-distribution display appear.

Data Memory Button

Cleaning Data

- Pressing the data memory button and the ADJ button simultaneously makes "DATA CLEAR" display appear, then pressing the data memory button again deletes the data in all of the film area.

ADJ Button

Select-Frame Film Transport

- When "Leader Leftout SelFrame Trans" is selected in the custom 3 with a film loaded, pressing and holding the ADJ button for 3 sec or longer makes "SEL FRAME TRANS" display appear. Then turning the front/rear control dial selects the frame number to be reloaded. Pressing the ADJ button again starts to transport the film to the specified frame.
- The frame counter turns black when an exposed frame is selected.

Audio Setting

- Pressing the ADJ button and the custom button simultaneously makes "AUDIO SET" display appear. Turning the front/rear control dial selects ON or OFF. (Beeping for self-timer count down(10sec), and focus confirmation(focus lock))

Spot-AF Button

Disconnection of AF Coupler in MF Mode

- In MF mode, pressing the lens release while pressing and holding the spot-AF button disconnects the AF coupler from the lens. (Characters "MF" in the display turn black.)
- Doing the same operation again resumes the connection of the AF coupler with the lens.

Standard

Exposure

Manual Shutter-speed

- (See page 51 Repair Guide)

SS	Period(ms)	Tolerance(ms)	Allowable range	Exposure variation
1/8000	0.122	0.083-0.179	With in 0.45EV	1/8000; Difference between Max. and Min. value among range A, B, and C: within ±0.6EV Difference between range A & B, B & C: within ±0.30EV
1/4000	0.244	0.179-0.334		
1/2000	0.488	0.370-0.644	Within 0.30EV	
1/1000	0.977	0.740-1.289		
1/500	1.95	1.590-2.400		
1/250	3.91	3.170-4.810		
1/200	5.00	3.800-6.170		
1/125	7.81	6.350-9.620		
1/60	15.60	12.70-19.20		
1/30	31.30	29.20-33.50		
1/15	62.50	58.30-70.00		
1/8	125.00	117.00-134.00		
1/4	250.00	233.00-268.00		
1/2	500.00	467.00-539.00		

X-sync Time Lag

- (See page 51 Repair Guide)

Shutter Speed	Item	Allowance
1/ 200 *(1/60)	X-sync delay time	0.3 ms or longer
	From X ON to the 2nd curtain appearance	1.45 ms or longer (4.65 - 5.55ms)

*Figures in brackets are for rear-flash sync.

Auto

- AE Level: with 50/1.7 lens, ISO 100, K-value 1.3 (See page 52 Repair Guide)

Exposure mode	Metering mode	Luminance	Allowance
P	14-segment honey comb	EV(LV)1 - EV(LV)15	Within 0±1.0 EV

Flash level

- Flash level: with 50/1.7 lens, ISO 100 (See page 53 Repair Guide)

F4±0.5EV (ISO 100)

Film Transport

Initial Load

- Required time with 5.8V. 0.6ohm using Power Supply Adapter (Red plug used), with a film KODAK GOLD 100.

1.5 sec or faster

Film Advance

- Required time with 5.8V. 0.6ohm using Power Supply Adapter (Red plug used), with a film KODAK GOLD 100 24 Exp.

High Speed: 3.85 fps, Low Speed: 1.8-2.2 fps

Film Rewind

- Required time with 5.8V. 0.6ohm using Power Supply Adapter (Red plug used), with a film KODAK GOLD 100 24Exp.

High speed: Within 7 sec Low speed(Silent): Within 14 seconds

Flash Recycling Time

- Recycling time with 5.8V. 0.6ohm using Power Supply Adapter (Red plug used).

About 3.2 sec

Current Leak

- With 5.8V. 0.6ohm using Power Supply Adapter (Red plug used)

Condition	Allowance
Main switch: ON(Film unloaded) Main switch: OFF(Film loaded)	30μA or less 50μA or less
Main switch: ON(APO is ON) Main switch: ON(on stand-by)	500 μA or less 50 μA or less

BC Check Level

- BC lock voltage using Power Supply Adapter (Red plug used)
  (See page 63 Repair Guide)

4.14(0.6ohm)

- Battery condition indicator appears in 4-step.
  -Full: Full-battery symbol
  -Low: Low-battery symbol
  -Alarm: Blinking low-battery symbol
  -Lock: Blinking low-battery symbol appears alone and the shutter locks.
  *The display turns completely blank if the battery has been completely expired.

Auto Power Off (APO)

- The eyepiece sensor suspends the operation about 10 min. after Grip Sw is ON while S0 is OFF.
- About 4 min. after exclusively S0 ON, it turns off.
- About 4 min. after the focus area selector is pressed and held, AF Button Sw. turns off
- With xi lens, about 3 min. and 30 sec. after PZ ring Sw is ON, it turns off.
- With xi lens, about 1min. and 30 sec. after PF ring Sw is ON, it turns off.
- With xi lens, about 2 minutes and after Ring Sw is ON, it turns off.
- About 3 minutes after lens is attached not securely, current leak becomes almost 0.

Item	APO operates after about
Grip SW on	10 min.
S0 on	4 min.
Focus-area selector on	4 min.
PZ SW. on	3 min.30 sec
PF SW. on	1 min.30 sec
Ring SW. on	2 min.
AF Coupler (Incorrect Lens Attachment)	3 min

Body Back

- Body back (See page 49 Repair Guide)

44.7 ± 0.015mm (44.685-44.715mm)

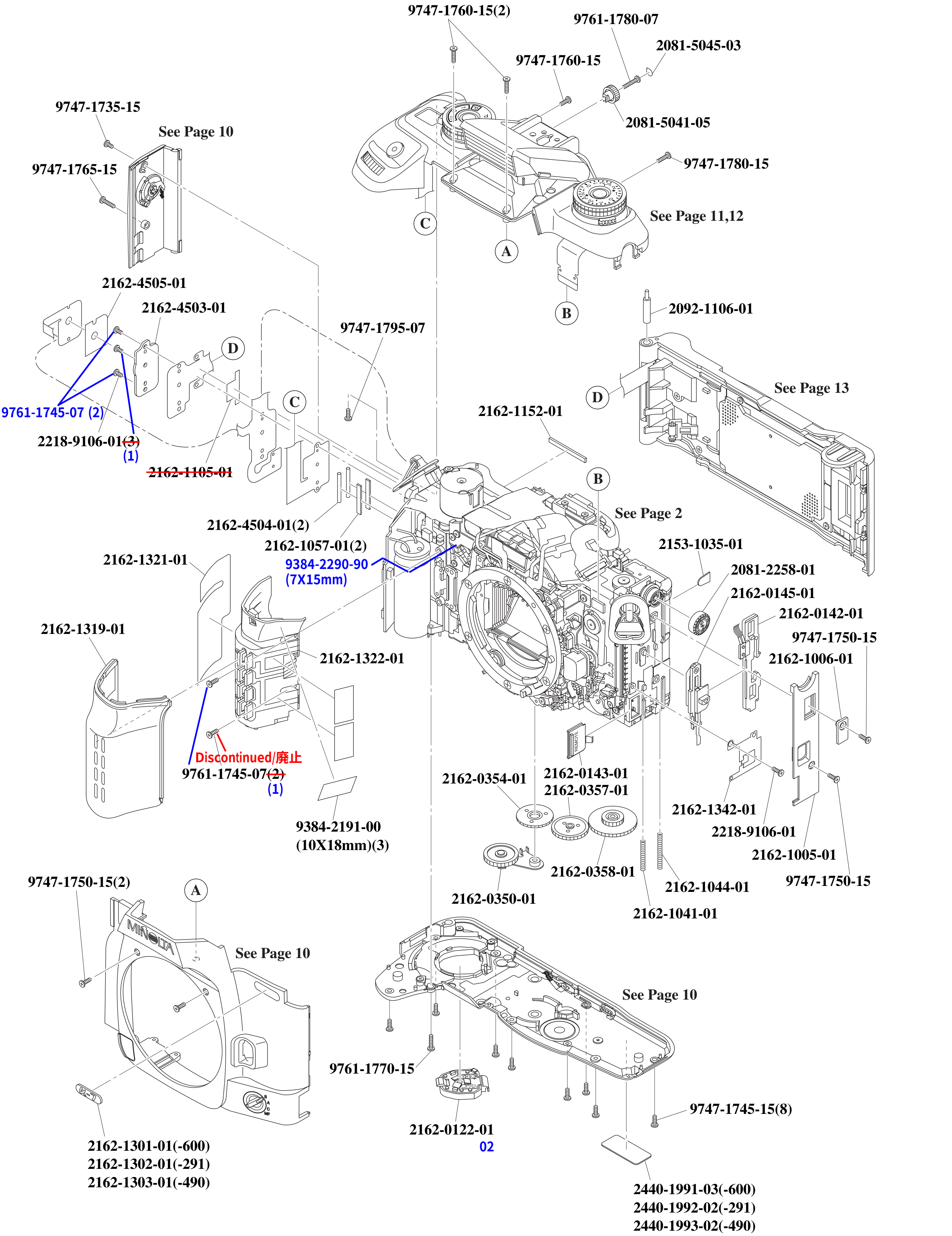
CHECK LIST

INDEX

INDEX

INDEX

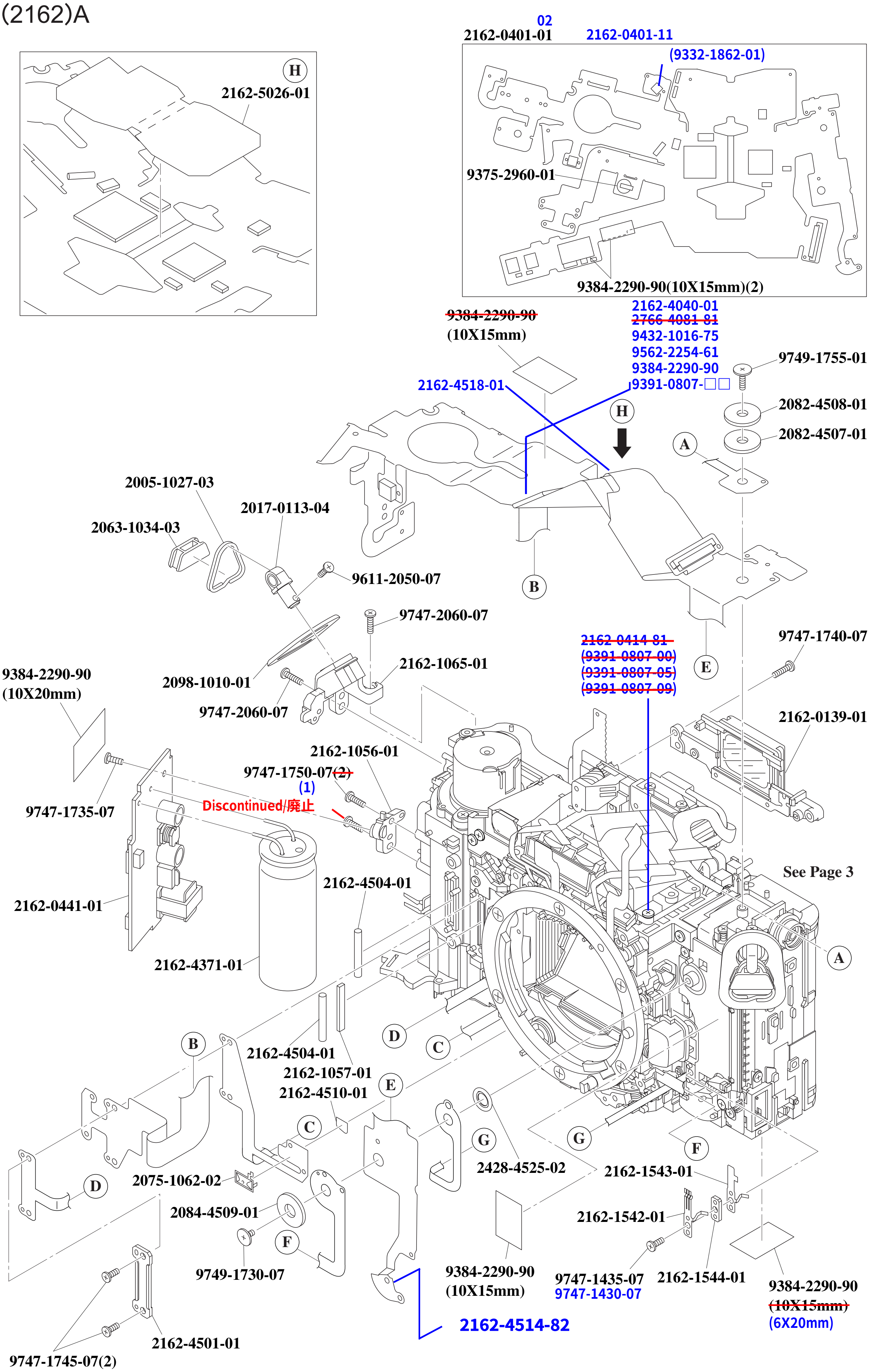
1(2162)A



9747-1760-15(2)
9761-1780-07
2081-5045-03
9747-1760-15
2081-5041-05
9747-1780-15
See Page 11,12
9747-1735-15
See Page 10
9747-1765-15
2162-4505-01
2162-4503-01
9761-1745-07 (2)
2218-9106-01(3)
(1)
2162-1105-01
9747-1795-07
2092-1106-01
See Page 13
2162-1152-01
See Page 2
2162-4504-01(2)
2162-1057-01(2)
9384-2290-90
(7X15mm)
2153-1035-01
2081-2258-01
2162-0145-01
2162-0142-01
9747-1750-15
2162-1006-01
2162-1321-01
2162-1319-01
2162-1322-01
Discontinued/廃止
9761-1745-07(2)
(1)
9384-2191-00
(10X18mm)(3)
2162-0354-01
2162-0143-01
2162-0357-01
2162-1342-01
2218-9106-01
2162-1005-01
2162-0358-01
2162-1044-01
9747-1750-15
2162-0350-01
2162-1041-01
9747-1750-15(2)
See Page 10
See Page 10
9761-1770-15
9747-1745-15(8)
2162-0122-01
02
2162-1301-01(-600)
2162-1302-01(-291)
2162-1303-01(-490)
2440-1991-03(-600)
2440-1992-02(-291)
2440-1993-02(-490)

PART NO	PART NAME		QTY.
*2162-0122-01	BATTERY COVER ASSY	電池蓋セット	1
2162-0122-02	BATTERY COVER ASSY	電池蓋セット	1
2162-0142-01	BACK COVER LOCK LEVER ASSY	裏蓋ロックレバーセット	1
2162-0143-01	REMOTE COVER ASSY	リモート蓋セット	1
2162-0145-01	BACK COVER LOCK JOINT LEVER ASSY	裏蓋ロック連結レバーセット	1
2162-0350-01	REWIND PLANETARY CARRIER ASSY	巻戻し遊星キャリアセット	1
2162-0354-01	REWIND SUN GEAR	巻戻し太陽ギヤ	1
2162-0357-01	REWIND IDLE GEAR	巻戻しアイドルギヤ	1
2162-0358-01	REWIND REDUCTION GEAR	巻戻し減速ギヤ	1
2162-1005-01	REWIND SIDE COVER-A	巻戻し側サイドカバーＡ	1
2162-1006-01	REWIND SIDE COVER-B	巻戻し側サイドカバーＢ	1
2153-1035-01	SCREW COVER	ボディシート	1
2162-1041-01	BACK COVER LOCK BUTTON SP	裏蓋ロックつまみＳＰ	1
2162-1044-01	BACK COVER LOCK LEVER SP	裏蓋ロックレバーＳＰ	1
2162-1057-01	BODY PRESSURE SPACER	ボディ圧接スペーサー	2
~~2162-1105-01~~	FPC-K TAPE	Ｋフレキ両面テープ	1
2092-1106-01	BACK COVER HINGE AXIS	裏蓋ヒンジ軸	1
2162-1152-01	BACK TERMINAL DUSTPROOF SHEET	バック端子防塵シート	1
2162-1301-01	VERSION NAME PLATE (-600)	銘板	}
2162-1302-01	VERSION NAME PLATE (-291)	銘板	} 1
2162-1303-01	VERSION NAME PLATE (-490)	銘板	}
2162-1319-01	GRIP RUBBER	グリップゴム	1
2162-1321-01	GRIP RUBBER DOUBLE FACED TAPE-A	グリップゴム両面テープＡ	1
2162-1322-01	GRIP RUBBER BASE	グリップゴム受け台	1
2162-1342-01	REMOTE COVER RETAINING PLATE	リモート蓋押え板	1
2440-1991-03	SERIAL NUMBER PLATE (JAPAN)	ボディＮＯ．プレート	}
2440-1992-02	SERIAL NUMBER PLATE (OSAKA JAPAN)	ボディＮＯ．プレート	} 1
2440-1993-02	SERIAL NUMBER PLATE (MALAYSIA)	ボディＮＯ．プレート	}
2081-2258-01	SYNCRO TERMINAL CAP	シンクロターミナルキャップ	1
2162-4503-01	CONNECTOR PLATE	圧接板	1
2162-4504-01	CONNECTOR RUBBER	圧接ゴム	2
2162-4505-01	FLASH MODE PATTERN TAPE	フラッシュモードパターンテープ	1
2081-5041-05	DIOPTER ADJUSTMENT DIAL	視度調ダイヤル	1
2081-5045-03	DIOPTER ADJUSTMENT NAME PLATE	視度調銘板	1
*2218-9106-01	SCREW	ねじ	~~4~~ 2
9384-2191-00	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	3
9384-2290-90	POLYESTER TAPE (PER ROLL) YELLOW	ポリエステルテープ	1
9747-1735-15	SCREW	ねじ	1
9747-1745-15	SCREW	ねじ	1
9747-1750-07	SCREW	ねじ	2
9747-1750-15	SCREW	ねじ	11
9747-1760-15	SCREW	ねじ	1
9747-1765-15	SCREW	ねじ	1
9747-1770-15	SCREW	ねじ	2
9747-1780-15	SCREW	ねじ	1
9747-1795-07	SCREW	ねじ	1
*9761-1745-07	SCREW	ねじ	~~2~~ 1
9761-1770-15	SCREW	ねじ	1
9761-1780-07	SCREW	ねじ	1

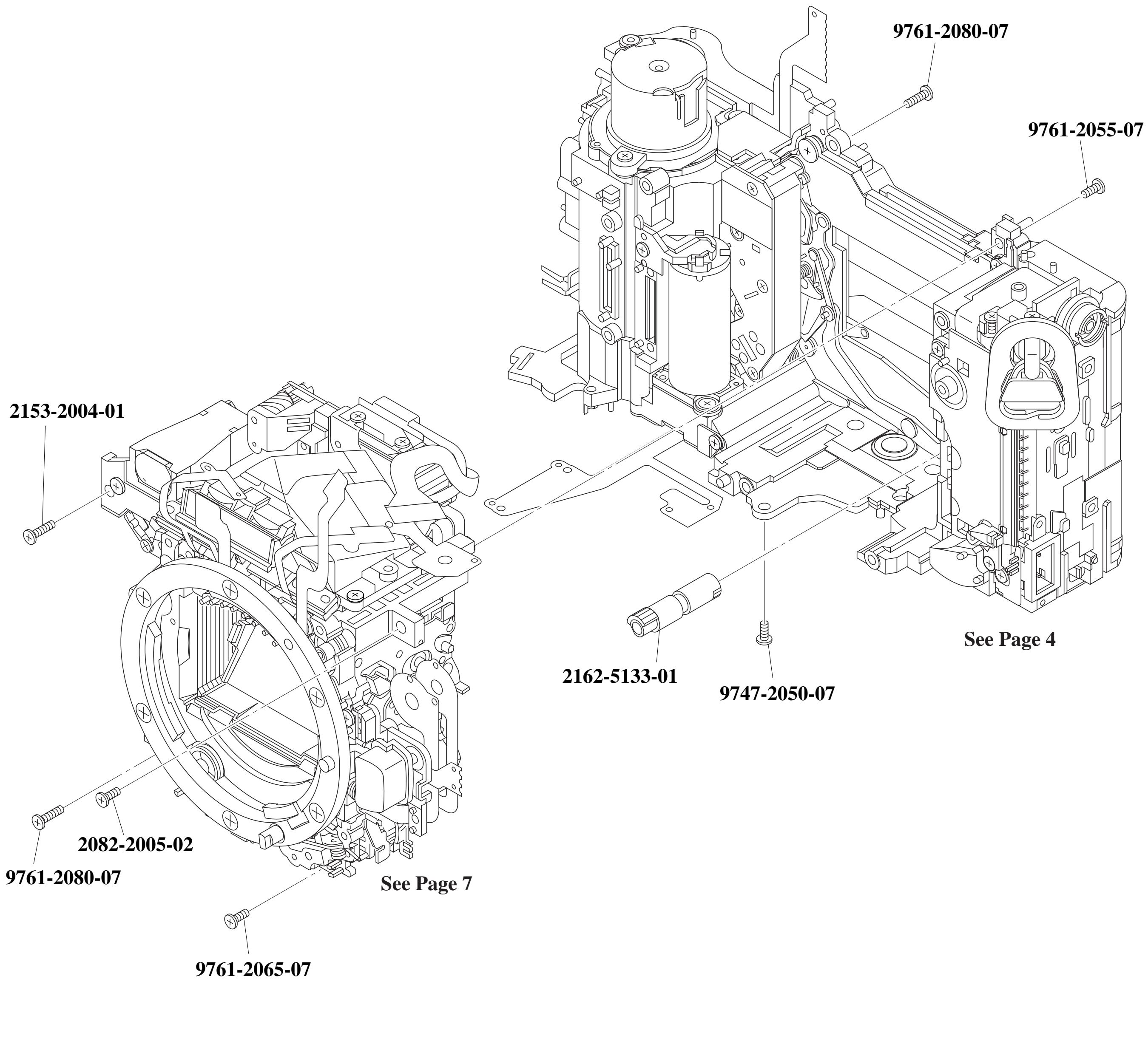
2(2162)A



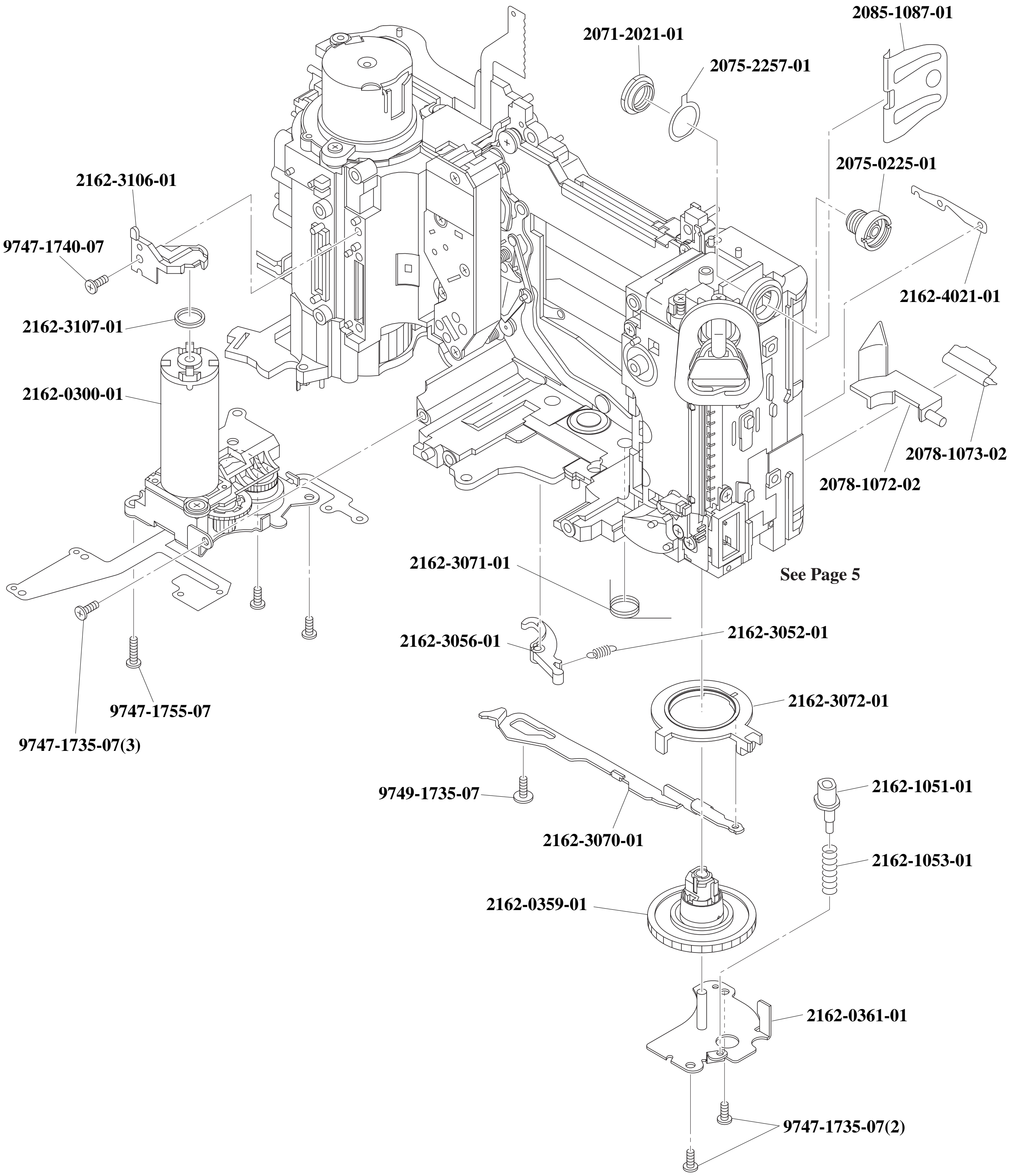
H
2162-5026-01
02
2162-0401-01
2162-0401-11
(9332-1862-01)
9375-2960-01
9384-2290-90(10X15mm)(2)
9384-2290-90
(10X15mm)
2162-4040-01
2766-4081-81
9432-1016-75
9562-2254-61
9384-2290-90
9391-0807-□□
2162-4518-01
9749-1755-01
H
2082-4508-01
A
2082-4507-01
2005-1027-03
2017-0113-04
2063-1034-03
9611-2050-07
B
9747-2060-07
2162-0414-81
(9391-0807-00)
(9391-0807-05)
(9391-0807-09)
9747-1740-07
E
9384-2290-90
(10X20mm)
2098-1010-01
2162-1065-01
9747-2060-07
2162-0139-01
2162-1056-01
9747-1750-07(2)
(1)
Discontinued/廃止
9747-1735-07
2162-4504-01
See Page 3
2162-0441-01
A
2162-4371-01
B
D
C
2162-4504-01
2162-1057-01
E
2162-4510-01
C
G
G
F
D
2075-1062-02
2428-4525-02
2162-1543-01
2084-4509-01
F
2162-1542-01
9749-1730-07
9384-2290-90
(10X15mm)
9747-1435-07
9747-1430-07
2162-1544-01
9384-2290-90
(10X15mm)
(6X20mm)
2162-4514-82
2162-4501-01
9747-1745-07(2)

PART NO	PART NAME		QTY.
2017-0113-04	STRAP EYELET ASSY	吊環セット	1
2162-0139-01	EYEPIECE FRAME ASSY	接眼枠セット	1
*2162-0401-01	FPC-A ASSY	Ａフレキセット	1
2162-0401-02	FPC-A ASSY	Ａフレキセット	1
2162-0401-11	FPC-A ASSY (FLASH MEMORY)	Ａフレキセット（フラッシュメモリー）	1
(9332-1862-01)	SW	ＳＷ	1
~~2162-0414-81~~	SUPPORT PCB ASSY	補助基板セット	1
~~(9391-0807-00)~~	LEAD WIRE-BLACK (PER METER)	リード線（黒）	1
~~(9391-0807-05)~~	LEAD WIRE-GREEN (PER METER)	リード線（緑）	1
~~(9391-0807-09)~~	LEAD WIRE-WHITE (PER METER)	リード線（白）	1
2162-0441-01	FLASH CONVERTER PCB ASSY	フラッシュコンバーター基板セット	1
2098-1010-01	STRAP EYELET PROTECTOR	三角環プロテクター	1
2005-1027-03	STRAP EYELET	三角吊環	1
2063-1034-03	TRIANGLE HANGER STOPPER	三角環回り止め	1
2162-1056-01	FLASH PCB HOLDER	フラッシュ基板保持台	1
2162-1057-01	BODY PRESSURE SPACER	ボディ圧接スペーサー	1
2075-1062-02	OVER RIDE CONTACT	オーバーライド接片	1
2162-1065-01	STRAP EYELET HOLDER-A	吊環ホルダーＡ	1
2162-1542-01	SLLK CONTACT-A	ＳＬＬＫ接片Ａ	1
2162-1543-01	SLLK CONTACT-B	ＳＬＬＫ接片Ｂ	1
2162-1544-01	SLLK CONTACT SPACER	ＳＬＬＫ接片スペーサー	1
2162-4040-01	SUPPORT PCB	補助基板	1
~~2766-4081-81~~	SUPPORT PCB	補助基板	1
2162-4371-01	C157	Ｃ１５７	1
2162-4501-01	CONNECTOR PLATE	圧接板	1
2162-4504-01	CONNECTOR RUBBER	圧接ゴム	2
2082-4507-01	A-C-K RUBBER CONNECTOR	Ａ－Ｃ－Ｋコネクターゴム	1
2082-4508-01	A-C-K CONNECTOR PLATE	Ａ－Ｃ－Ｋコネクター押え板	1
2084-4509-01	RUBBER CONNECTOR	コネクターゴム	1
2162-4510-01	FPC-C TAPE	Ｃフレキ両面テープ	1
2162-4514-82	DOUBLE-FACED TAPE	両面テープ	1
2162-4518-01	FLASH WIRE PROTECTION TAPE	フラッシュコード保護テープ	1
2428-4525-02	FPC RUBBER	ＦＰＣ圧接ゴム	1
2162-5026-01	PENTAPRISM INSULATING SHEET	ペンタ絶縁シート	1
9375-2960-01	BATTERY	電池	1
*9384-2290-90	POLYESTER TAPE (PER ROLL/60M) YELLOW	ポリエステルテープ	~~3~~ ~~5~~ 6
9391-0807-□□	LEAD WIRE	リード線	2 - 3
9432-1016-75	RESISTOR (100Ω)	抵抗	1
9562-2254-61	CAPACITOR (2.2μF)	コンデンサー	1
9611-2050-07	SCREW	ねじ	1
9747-1430-07	SCREW	ねじ	1
~~9747-1435-07~~	SCREW	ねじ	1
9747-1735-07	SCREW	ねじ	1
9747-1740-07	SCREW	ねじ	1
9747-1745-07	SCREW	ねじ	2
*9747-1750-07	SCREW	ねじ	~~2~~ 1
9747-2060-07	SCREW	ねじ	2
9749-1730-07	SCREW	ねじ	1
9749-1755-01	SCREW	ねじ	1

3(2162)A

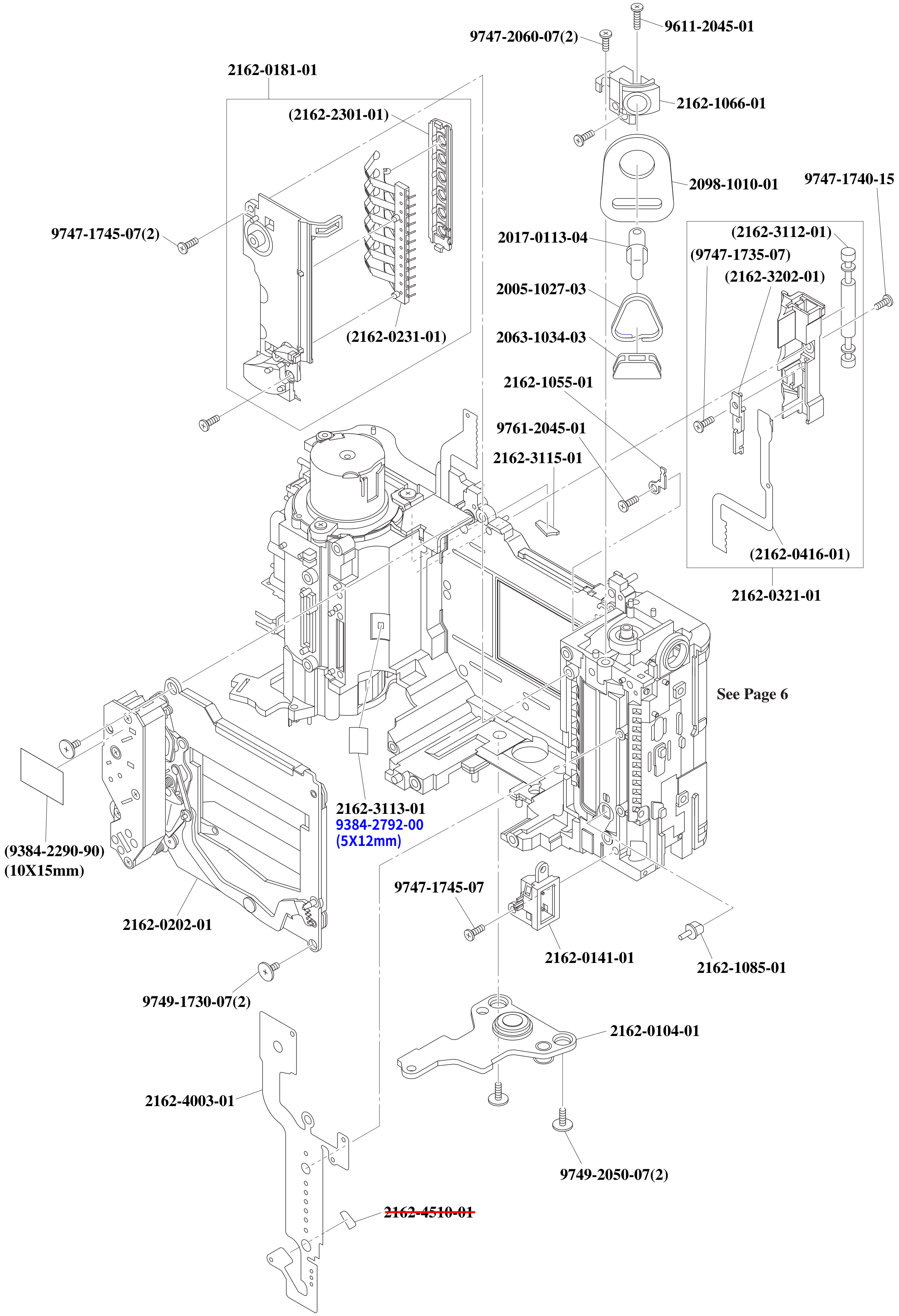

9761-2080-07
9761-2055-07
2153-2004-01
See Page 4
2162-5133-01
9747-2050-07
2082-2005-02
9761-2080-07
See Page 7
9761-2065-07

PART NO	PART NAME		QTY.
2153-2004-01	SCREW	ねじ	1
2082-2005-02	SCREW	ねじ	1
2162-5133-01	SHUTTER CHARGE GEAR	シャッターチャージギヤ	1
9747-2050-07	SCREW	ねじ	1
9761-2055-07	SCREW	ねじ	1
9761-2065-07	SCREW	ねじ	1
9761-2080-07	SCREW	ねじ	2


2085-1087-01
2071-2021-01
2075-2257-01
2075-0225-01
2162-3106-01
9747-1740-07
2162-4021-01
2162-3107-01
2162-0300-01
2078-1073-02
2078-1072-02
2162-3071-01
See Page 5
2162-3052-01
2162-3056-01
2162-3072-01
9747-1755-07
9747-1735-07(3)
2162-1051-01
9749-1735-07
2162-3070-01
2162-1053-01
2162-0359-01
2162-0361-01
9747-1735-07(2)

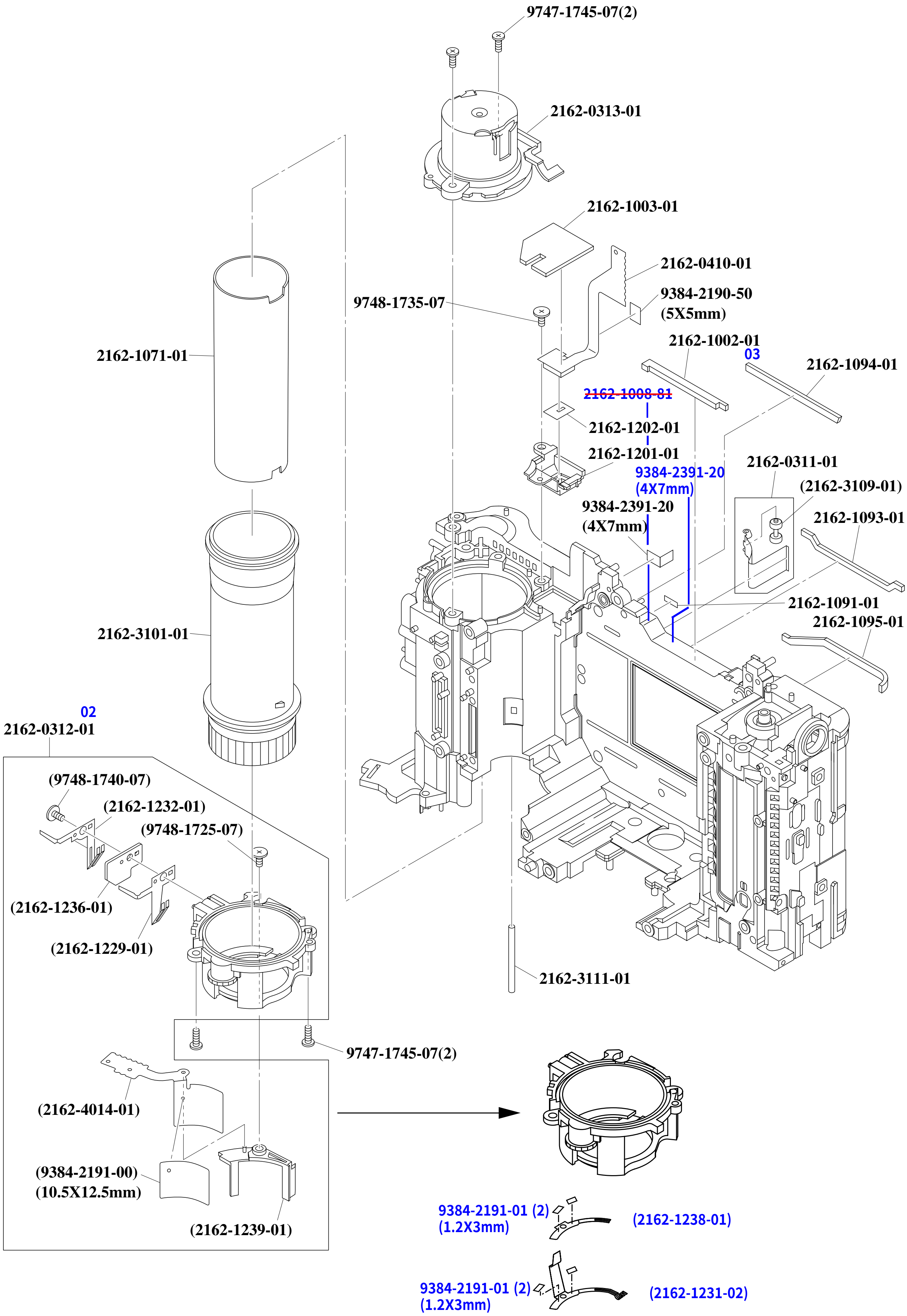
PART NO	PART NAME		QTY.
2075-0225-01	SYNCRO TERMINAL UNIT	シンクロターミナルユニット	1
2162-0300-01	WINDING BASE PLATE ASSY	巻上げ台板セット	1
2162-0359-01	FORK GEAR ASSY	フォークギヤセット	1
2162-0361-01	REWIND BASE PLATE ASSY	巻戻し台板セット	1
2162-1051-01	FILM PUSH-UP PIN	パト押し上げピン	1
2162-1053-01	FILM PUSH-UP PIN SP	パト押し上げピンＳＰ	1
2078-1072-02	FILM CARTRIDGE RECEIVER	パト口金受け	1
2078-1073-02	CARTRIDGE RECEIVER SP	口金受回転ＳＰ	1
2085-1087-01	SIDE SP	サイドＳＰ	1
2071-2021-01	SYNC. TERMINAL NUT	シンクロターミナル止めナット	1
2075-2257-01	SYNC. TERMINAL	シンクロターミナル板	1
2162-3052-01	REWIND PLANETARY CARRIER SP	巻戻し遊星キャリアＳＰ	1
2162-3056-01	REWIND PLANETARY LEVER	巻戻し遊星レバー	1
2162-3070-01	SAFETY LOCK LEVER	セーフティロックレバー	1
2162-3071-01	SAFETY LOCK LEVER SP	セーフティロックレバーＳＰ	1
2162-3072-01	SAFETY LOCK COUPLING LEVER	セーフティロック変換レバー	1
2162-3106-01	WINDING MOTOR GUIDE	巻上げモーターガイド板	1
2162-3107-01	WINDING MOTOR GUIDE RUBBER	巻上げモーターガイドゴム	1
2162-4021-01	FPC-U	Ｕフレキ	1
9747-1735-07	SCREW	ねじ	5
9747-1740-07	SCREW	ねじ	1
9747-1755-07	SCREW	ねじ	1
9749-1735-07	SCREW	ねじ	1

5(2162)A


9611-2045-01
9747-2060-07(2)
2162-0181-01
2162-1066-01
(2162-2301-01)
2098-1010-01
9747-1740-15
9747-1745-07(2)
2017-0113-04
(2162-3112-01)
(9747-1735-07)
(2162-3202-01)
2005-1027-03
2063-1034-03
(2162-0231-01)
2162-1055-01
9761-2045-01
2162-3115-01
(2162-0416-01)
2162-0321-01
See Page 6
2162-3113-01
9384-2792-00
(5X12mm)
(9384-2290-90)
(10X15mm)
9747-1745-07
2162-0202-01
2162-0141-01
2162-1085-01
9749-1730-07(2)
2162-0104-01
2162-4003-01
9749-2050-07(2)
2162-4510-01

PART NO	PART NAME		QTY.
2162-0104-01	TRIPOD BASE ASSY	三脚台板セット	1
2017-0113-04	STRAP HANGER SET	吊環セット	1
2162-0141-01	REMOTE RELEASE HOLDER ASSY	リモートターミナルホルダーセット	1
2162-0181-01	DX CONTACT HOLDER ASSY	ＣＡＳ接片ホルダーセット	1
(2162-0231-01)	DX CONTACT ASSY	ＣＡＳ接片セット	1
(2162-2301-01)	DX FLOATING PLATE	ＣＡＳフローティング台	1
2162-0202-01	SHUTTER ASSY	シャッターセット	1
(9384-2290-90)	POLYESTER TAPE (PER ROLL/60M) YELLOW	ポリエステルテープ	1
2162-0321-01	FILM GUIDE ASSY	フィルムガイドセット	1
(2162-0416-01)	FPC-P ASSY	Ｐフレキセット	1
(2162-3112-01)	FILM GUIDE ROLLER	フィルムガイドローラー	1
(2162-3202-01)	PR HOLDING BASE PLATE	ＰＲ付勢台板	1
(9747-1735-07)	SCREW	ねじ	1
2098-1010-01	STRAP EYELET PROTECTOR	三角環プロテクター	1
2005-1027-03	STRAP EYELET	三角吊環	1
2063-1034-03	TRIANGLE HANGER STOPPER	三角環回り止め	1
2162-1055-01	GROUND PLATE	ラグ板	1
2162-1066-01	STRAP EYELET HOLDER-B	吊環ホルダーＢ	1
2162-1085-01	FILM DETECT PIN	パト検知ピン	1
~~*2162-3113-01~~	FILM GUIDE ROLLER LIGHT SHIELD	フィルム押えローラー軸遮光シート	1
2162-3115-01	FILM GUIDE SHEET	フィルムガイドシート	1
2162-4003-01	FPC-C	Ｃフレキ	1
~~2162-4510-01~~	FPC-C TAPE	Ｃフレキ両面テープ	1
9384-2792-00	FILM TAPE-A (PER ROLL/BLACK)	フィルムテープ	1
9611-2045-01	SCREW	ねじ	1
9747-1740-15	SCREW	ねじ	1
9747-1745-07	SCREW	ねじ	3
9747-2060-07	SCREW	ねじ	2
9749-1730-07	SCREW	ねじ	2
9749-2050-07	SCREW	ねじ	2
9761-2045-01	SCREW	ねじ	1

6(2162)A

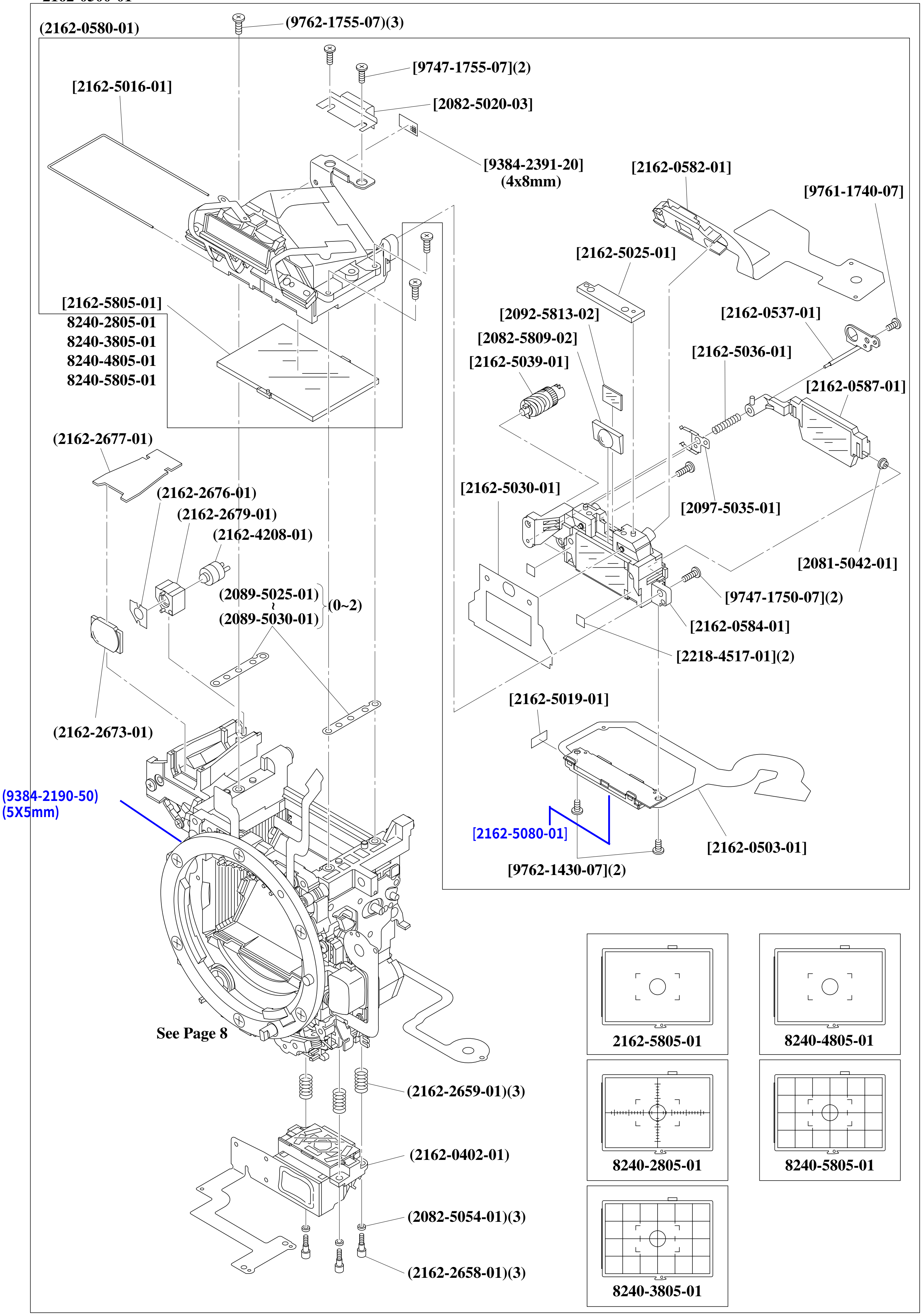


9747-1745-07(2)
2162-0313-01
2162-1003-01
2162-0410-01
9384-2190-50
(5X5mm)
9748-1735-07
2162-1071-01
2162-1002-01
03
2162-1094-01
2162-1008-01
2162-1202-01
2162-1201-01
2162-0311-01
9384-2391-20
(4X7mm)
(2162-3109-01)
9384-2391-20
(4X7mm)
2162-1093-01
2162-1091-01
2162-1095-01
2162-3101-01
02
2162-0312-01
(9748-1740-07)
(2162-1232-01)
(9748-1725-07)
(2162-1236-01)
(2162-1229-01)
2162-3111-01
9747-1745-07(2)
(2162-4014-01)
(9384-2191-00)
(10.5X12.5mm)
(2162-1239-01)
9384-2191-01 (2)
(1.2X3mm)
(2162-1238-01)
9384-2191-01 (2)
(1.2X3mm)
(2162-1231-02)

PART NO	PART NAME		QTY.
2162-0311-01	FILM ROLLER ASSY	フィルム押えローラーセット	1
(2162-3109-01)	FILM ROLLER	フィルム押えローラー	1
*2162-0312-01	SPOOL BOTTOM PLATE ASSY	スプール台板下セット	1
2162-0312-02	SPOOL BOTTOM PLATE ASSY	スプール台板下セット	1
(2162-1231-02)	BATTERY CONTACT-B (+)	電池接片Ｂ　（＋）	1
(2162-1238-01)	BATTERY CONTACT-C (+)	電池接片Ｃ　（＋）	1
(2162-1229-01)	BATTERY CONTACT-G (+)	電池接片Ｇ　（＋）	1
(2162-1232-01)	BATTERY CONTACT-B (-)	電池接片Ｂ　（－）	1
(2162-1236-01)	BATTERY CONTACT INSULATION SHEET	電池接片絶縁シート	1
(2162-1239-01)	FPC-N RETAINER	Ｎフレキ押え	1
(2162-4014-01)	FPC-N	Ｎフレキ	1
(9384-2191-00)	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
(9748-1725-07)	SCREW	ねじ	1
(9748-1740-07)	SCREW	ねじ	1
2162-0313-01	SPOOL TOP PLATE ASSY	スプール台板上セット	1
2162-0410-01	FPC-J ASSY	Ｊフレキセット	1
*2162-1002-01	LIGHT SHIELD SPONGE-A	遮光スポンジＡ	1
2162-1002-03	LIGHT SHIELD SPONGE-A	遮光スポンジＡ	1
2162-1003-01	LIGHT SHIELD SPONGE-B	遮光スポンジＢ	1
~~2162-1008-81~~	LIGHT SHIELD SPONGE	遮光スポンジ	1
2162-1071-01	BATTERY CHAMBER BARREL	電池室内筒	1
2162-1091-01	FILM TIP INDEX	ローディング指標	1
2162-1093-01	LIGHT SHIELD SPONGE-C	遮光スポンジＣ	1
2162-1094-01	LIGHT SHIELD SPONGE-D	遮光スポンジＤ	1
2162-1095-01	LIGHT SHIELD SPONGE-E	遮光スポンジＥ	1
2162-1201-01	DATE LED HOLDER	デートＬＥＤホルダー	1
2162-1202-01	DATE LED MASK	デートＬＥＤマスク	1
2162-3101-01	SPOOL	スプール	1
2162-3111-01	FILM ROLLER SHAFT	フィルム押えローラー軸	1
9384-2191-01	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	4
9384-2190-50	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
*9384-2391-20	ACETATE TAPE (PER ROLL)	アセテートクロステープ	~~1~~ 2
9747-1745-07	SCREW	ねじ	4
9748-1735-07	SCREW	ねじ	1

7(2162)A

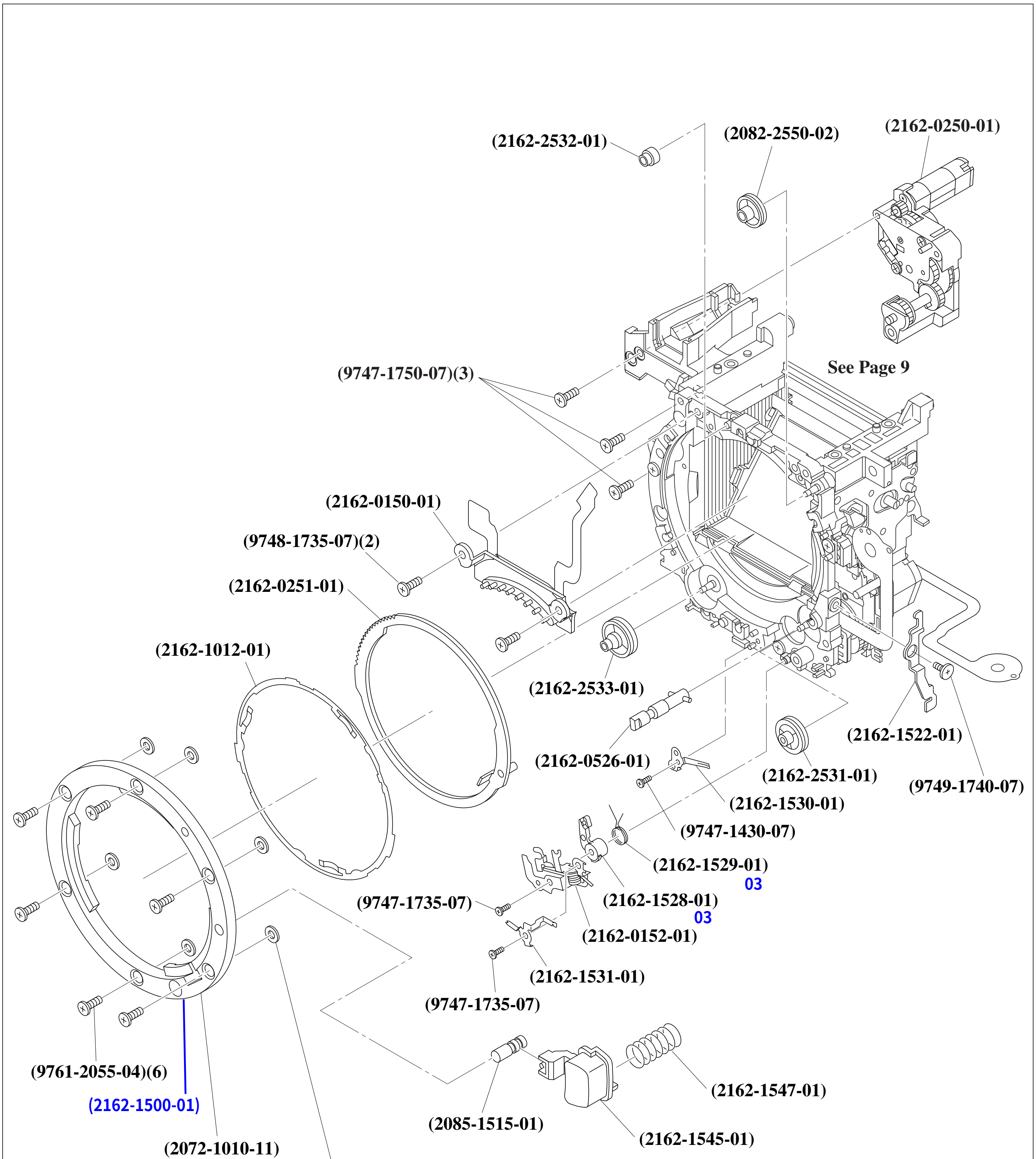
2162-0500-01



PART NO	PART NAME		QTY.
2162-0500-01	MIRROR BOX ASSY	ミラーボックスセット	1
(2162-0402-01)	FPC-B ASSY	Ｂフレキセット	1
(2162-0580-01)	PENTAPRISM ASSY	ペンタプリズムセット	1
[2162-0503-01]	LCD2 HOLDER ASSY	ＬＣＤ２ホルダーセット	1
[2162-0537-01]	DIOPTER-ADJUST LEVER ASSY	視度調整レバーセット	1
[2162-0582-01]	SPC1 HOLDER ASSY	ＳＰＣ１ホルダーセット	1
[2162-0584-01]	EYEPIECE LENS HOLDER ASSY	接眼レンズホルダーセット	1
[2162-0587-01]	EYEPIECE LENS ASSY	接眼レンズセット	1
[2218-4517-01]	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	2
[2162-5016-01]	FOCUSING SCREEN SP	焦点板押えＳＰ	1
[2162-5019-01]	IF LIGHT SHIELD TAPE	ＩＦバックライト遮光テープ	1
[2082-5020-03]	SPC1 PRESSURE	ＳＰＣ１押え	1
[2162-5025-01]	AE COVER PLATE	ＡＥカバー板	1
[2162-5030-01]	EYEPIECE MASK	接眼マスクシート	1
[2097-5035-01]	DIOPTER ADJUSTMENT CLICK SP	視度調クリックＳＰ	1
[2162-5036-01]	DIOPTER ADJUSTMENT SP	視度調整ＳＰ	1
[2162-5039-01]	DIOPTER ADJUSTMENT CAM ASSY	視度調整カム	1
[2081-5042-01]	DIOPTER ADJUSTMENT SHAFT-A	視度調軸Ａ	1
[2162-5080-01]	LCD2 SHIELD TAPE	ＬＣＤ２シールドテープ	1
[2162-5805-01]	FOCUSING SCREEN	焦点板	1
[2082-5809-02]	METERING LENS	測光用レンズ	1
[2092-5813-02]	FILTER-S	フィルターＳ	1
[9747-1750-07]	SCREW	ねじ	2
[9747-1755-07]	SCREW	ねじ	2
[9761-1740-07]	SCREW	ねじ	1
[9762-1430-07]	SCREW	ねじ	2
(2162-2658-01)	AF ADJUSTMENT SCREW	ＡＦ調整ねじ	3
(2162-2659-01)	AF ADJUSTMENT SP	ＡＦ調整ＳＰ	3
(2162-2673-01)	AF ILLUMINATOR LENS	補助光レンズ	1
(2162-2676-01)	AF ILLUMINATOR FILM	補助光フィルム	1
(2162-2677-01)	AF ILLUMINATOR LIGHT SHIELD SHEET	補助光遮光シート	1
(2162-2679-01)	AF ILLUMINATOR LED HOLDER	補助光ＬＥＤホルダー	1
(2162-4208-01)	LD 1	ＬＤ　１	1
(2089-5025-01)	VB ADJUSTMENT PLATE-A (T=0.15)	ＶＢ調整板Ａ	
(2089-5026-01)	VB ADJUSTMENT PLATE-B (T=0.20)	ＶＢ調整板Ｂ	
(2089-5027-01)	VB ADJUSTMENT PLATE-C (T=0.25)	ＶＢ調整板Ｃ	0-2
(2089-5028-01)	VB ADJUSTMENT PLATE-D (T=0.30)	ＶＢ調整板Ｄ	
(2089-5029-01)	VB ADJUSTMENT PLATE-E (T=0.35)	ＶＢ調整板Ｅ	
(2089-5030-01)	VB ADJUSTMENT PLATE-F (T=0.40)	ＶＢ調整板Ｆ	
(2082-5054-01)	WASHER	ワッシャ	3
(9384-2190-50)	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
(9384-2391-20)	ACETATE TAPE (PER ROLL)	アセテートクロステープ	1
(9762-1755-07)	SCREW	ねじ	3
8240-2805-01	FOCUSING SCREEN (S)	焦点板(S)	1
8240-3805-01	FOCUSING SCREEN (L)	焦点板(L)	1
8240-4805-01	FOCUSING SCREEN (M)	焦点板（M)	1
8240-5805-01	FOCUSING SCREEN (ML)	焦点板（ＭＬ）	1

8(2162)A

2162-0500-01



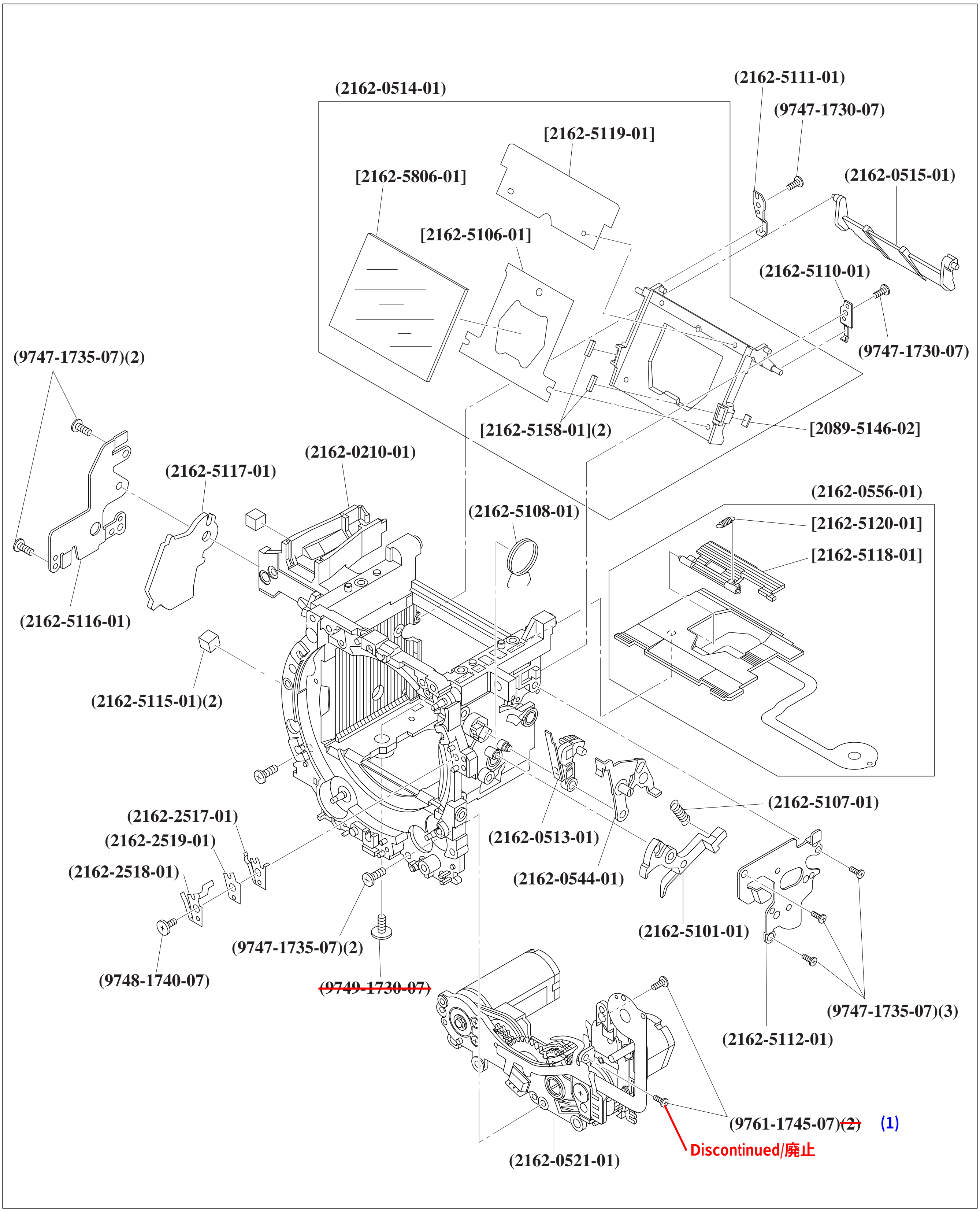
2072-1010-71

2005-1061-81
2005-1062-81 (Some)
2005-1063-81

PART NO	PART NAME		QTY.
2162-0500-01	MIRROR BOX ASSY	ミラーボックスセット	1
(2162-0150-01)	BL CONTACT HOLDER ASSY	ＢＬ接片ホルダーセット	1
(2162-0152-01)	FOCUS MODE SWITCH ASSY	ＡＦ／M台板セット	1
(2162-0250-01)	APERTURE BASEPLATE ASSY	絞り台板セット	1
(2162-0251-01)	APERTURE RING ASSY	絞りリングセット	1
(2162-0526-01)	AF COUPLER ASSY	ＡＦカプラーセット	1
(2072-1010-11)	BAYONET LENS MOUNT	マウント	1
(2162-1012-01)	RING SP	リングＳＰ	1
(2162-1500-01)	SPACER SPONGE	スペーサースポンジ	1
(2085-1515-01)	LENS LOCK PIN	レンズロックピン	1
(2162-1522-01)	COUPLER LEVER	カプラー連動レバー	1
*(2162-1528-01)	COUPLER LOCK LEVER	カプラー係止レバー	1
(2162-1528-03)	COUPLER LOCK LEVER	カプラー係止レバー	1
*(2162-1529-01)	COUPLER LOCK LEVER SP	カプラー係止レバーＳＰ	1
(2162-1529-03)	COUPLER LOCK LEVER SP	カプラー係止レバーＳＰ	1
(2162-1530-01)	FOCUS MODE SWITCH CONTACT-A	ＳＡＦ／M接片Ａ	1
(2162-1531-01)	FOCUS MODE SWITCH CONTACT-B	ＳＡＦ／M接片Ｂ	1
(2162-1545-01)	LENS LOCK BUTTON	レンズロック釦	1
(2162-1547-01)	LENS LOCK SP	レンズロックＳＰ	1
(2162-2531-01)	RING ROLLER-A	リングローラーＡ	1
(2162-2532-01)	RING ROLLER-C	リングローラーＣ	1
(2162-2533-01)	RING ROLLER-D	リングローラーＤ	1
(2082-2550-02)	RING ROLLER-B	リングローラーＢ	1
(9747-1430-07)	SCREW	ねじ	1
(9747-1735-07)	SCREW	ねじ	2
(9747-1750-07)	SCREW	ねじ	3
(9748-1735-07)	SCREW	ねじ	2
(9749-1740-07)	SCREW	ねじ	1
(9761-2055-04)	SCREW	ねじ	6
2072-1010-71	BAYONET LENS MOUNT	マウント	1
2005-1061-81	ADJUSTMENT WASHER-A (T=0.02)	調整ワッシャＡ	
2005-1062-81	ADJUSTMENT WASHER-B (T=0.05)	調整ワッシャＢ	Some
2005-1063-81	ADJUSTMENT WASHER-C (T=0.1)	調整ワッシャＣ	

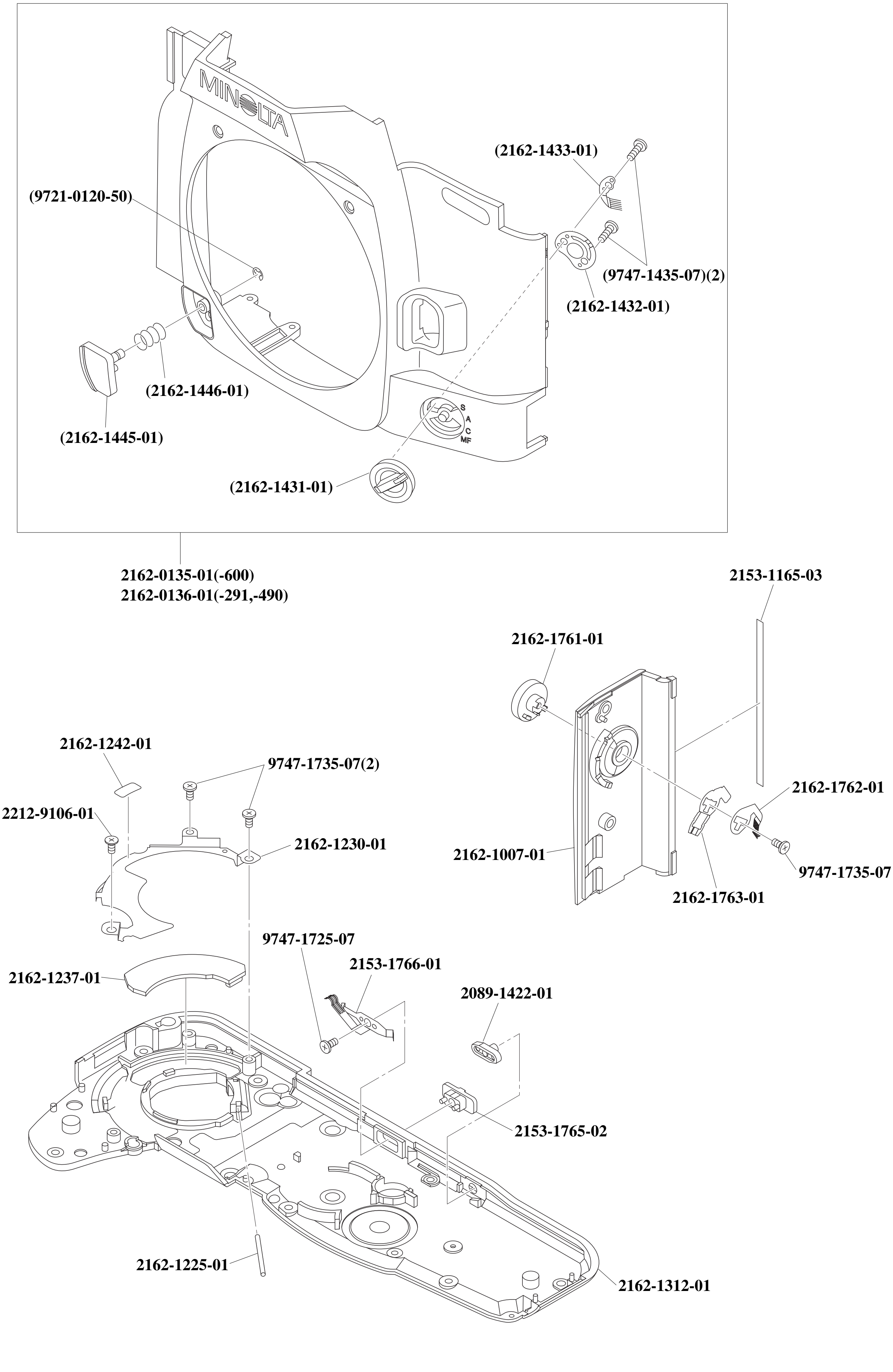
9(2162)A

2162-0500-01



PART NO	PART NAME		QTY.
2162-0500-01	MIRROR BOX ASSY	ミラーボックスセット	1
(2162-0210-01)	FRONT FRAME ASSY	前枠セット	1
(2162-0513-01)	SUB MIRROR DRIVE LEVER ASSY	サブミラー駆動レバーセット	1
(2162-0514-01)	MAIN MIRROR HOLDER ASSY	主ミラーホルダーセット	1
[2162-5106-01]	MASK PLATE	マスク板	1
[2162-5119-01]	MIRROR CURTAIN	ミラーカーテン	1
[2089-5146-02]	MIRROR STOPPER	ミラーストッパー	1
[2162-5158-01]	MAIN MIRROR CUSHION	主ミラークッション	2
[2162-5806-01]	MAIN MIRROR	主ミラー	1
(2162-0515-01)	SUB MIRROR HOLDER ASSY	サブミラーホルダーセット	1
(2162-0521-01)	AF/CHARGE BASEPLATE ASSY	ＡＦ／チャージ台板セット	1
(2162-0544-01)	MAIN MIRROR DRIVE LEVER ASSY	主ミラー駆動レバーセット	1
(2162-0556-01)	SPC2 HOLDER ASSY	ＳＰＣ２ホルダーセット	1
[2162-5118-01]	FLARE CUT PLATE	フレア防止板	1
[2162-5120-01]	FLARE CUT PLATE SP	フレア防止駆動ＳＰ	1
(2162-2517-01)	SFOPEN CONTACT-A	開放検知ＳＷ接片Ａ	1
(2162-2518-01)	SFOPEN CONTACT-B	開放検知ＳＷ接片Ｂ	1
(2162-2519-01)	SFOPEN SPACER	開放検知ＳＷスペーサー	1
(2162-5101-01)	MIRROR DRIVE LEVER	ミラー駆動レバー	1
(2162-5107-01)	MIRROR OVERCHARGE SP	ミラーオーバーチャージＳＰ	1
(2162-5108-01)	MIRROR DRIVE SP	ミラー駆動ＳＰ	1
(2162-5110-01)	MAIN MIRROR HOLDER RETAINER-A	主ミラーホルダー押え板Ａ	1
(2162-5111-01)	MAIN MIRROR HOLDER RETAINER-B	主ミラーホルダー押え板Ｂ	1
(2162-5112-01)	REWIND BALANCER BASEPLATE	巻戻し側バランサー台板	1
(2162-5115-01)	BALANCER STOPPER	バランサーストッパー	2
(2162-5116-01)	WINDING BALANCER BASEPLATE	巻上げ側バランサー台板	1
(2162-5117-01)	WIND BALANCER	巻上げ側バランサー	1
(9747-1730-07)	SCREW	ねじ	2
(9747-1735-07)	SCREW	ねじ	7
(9748-1740-07)	SCREW	ねじ	1
~~(9749-1730-07~~)	SCREW	ねじ	1
*(9761-1745-07)	SCREW	ねじ	~~2~~ 1

10(2162)A

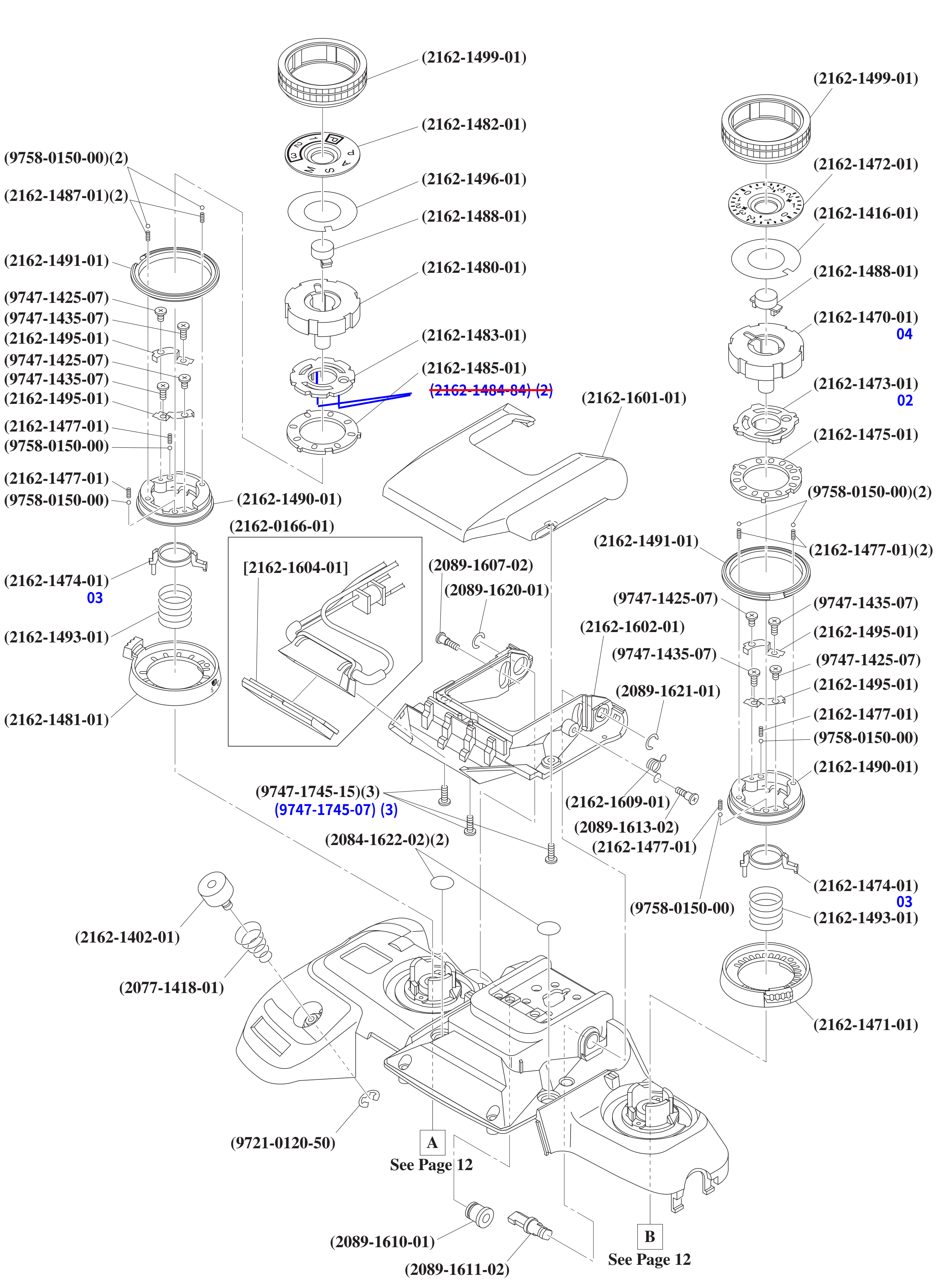


MINOLTA
(2162-1433-01)
(9721-0120-50)
(9747-1435-07)(2)
(2162-1432-01)
S
A
C
MF
(2162-1446-01)
(2162-1445-01)
(2162-1431-01)
2162-0135-01(-600)
2162-0136-01(-291,-490)
2153-1165-03
2162-1761-01
2162-1242-01
9747-1735-07(2)
2212-9106-01
2162-1230-01
2162-1762-01
2162-1007-01
9747-1735-07
2162-1763-01
9747-1725-07
2153-1766-01
2162-1237-01
2089-1422-01
2153-1765-02
2162-1225-01
2162-1312-01

PART NO	PART NAME		QTY.
2162-0135-01	FRONT COVER ASSY (-600)	前カバーセット	1
2162-0136-01	FRONT COVER ASSY (-291, -490)	前カバーセット	
(2162-1431-01)	FOCUS MODE SWITCH	ＡＦモード切替えつまみ	1
(2162-1432-01)	FOCUS MODE SWITCH CLICK PLATE	ＡＦモード切替えクリック板	1
(2162-1433-01)	FOCUS MODE SWITCH CONTACT	ＡＦモード切替え接片	1
(2162-1445-01)	PREVIEW BUTTON	プレビュー釦	1
(2162-1446-01)	PREVIEW BUTTON SP	プレビュー釦ＳＰ	1
(9721-0120-50)	E-RING	Ｅリング	1
(9747-1435-07)	SCREW	ねじ	2
2162-1007-01	WINDING-SIDE COVER	巻上げ側サイドカバー	1
2153-1165-03	LIGHT SHIELD SPONGE-B	遮光片Ｂ	1
2162-1225-01	BATTERY COVER HINGE SHAFT	電池蓋ヒンジ軸	1
2162-1230-01	VC BATTERY CONTACT COVER PRESSURE	ＶＣ電源蓋押え	1
2162-1237-01	VC BATTERY CONTACT COVER	ＶＣ電源蓋	1
2162-1242-01	INSULATION SHEET	絶縁シート	1
2162-1312-01	BOTTOM COVER	下カバー	1
2089-1422-01	REWIND BUTTON	途中巻戻し釦	1
2162-1761-01	FLASH MODE BUTTON	フラッシュモードつまみ	1
2162-1762-01	FLASH MODE CONTACT	フラッシュモード切替え接片	1
2162-1763-01	FLASH MODE CLICK PLATE	フラッシュモードクリック板	1
2153-1765-02	EYE-START SWITCH	アイスタートスイッチレバー	1
2153-1766-01	EYE-START SWITCH CONTACT	アイスタートスイッチ接片	1
2212-9106-01	SCREW	ねじ	1
9747-1725-07	SCREW	ねじ	1
9747-1735-07	SCREW	ねじ	3

11(2162)A

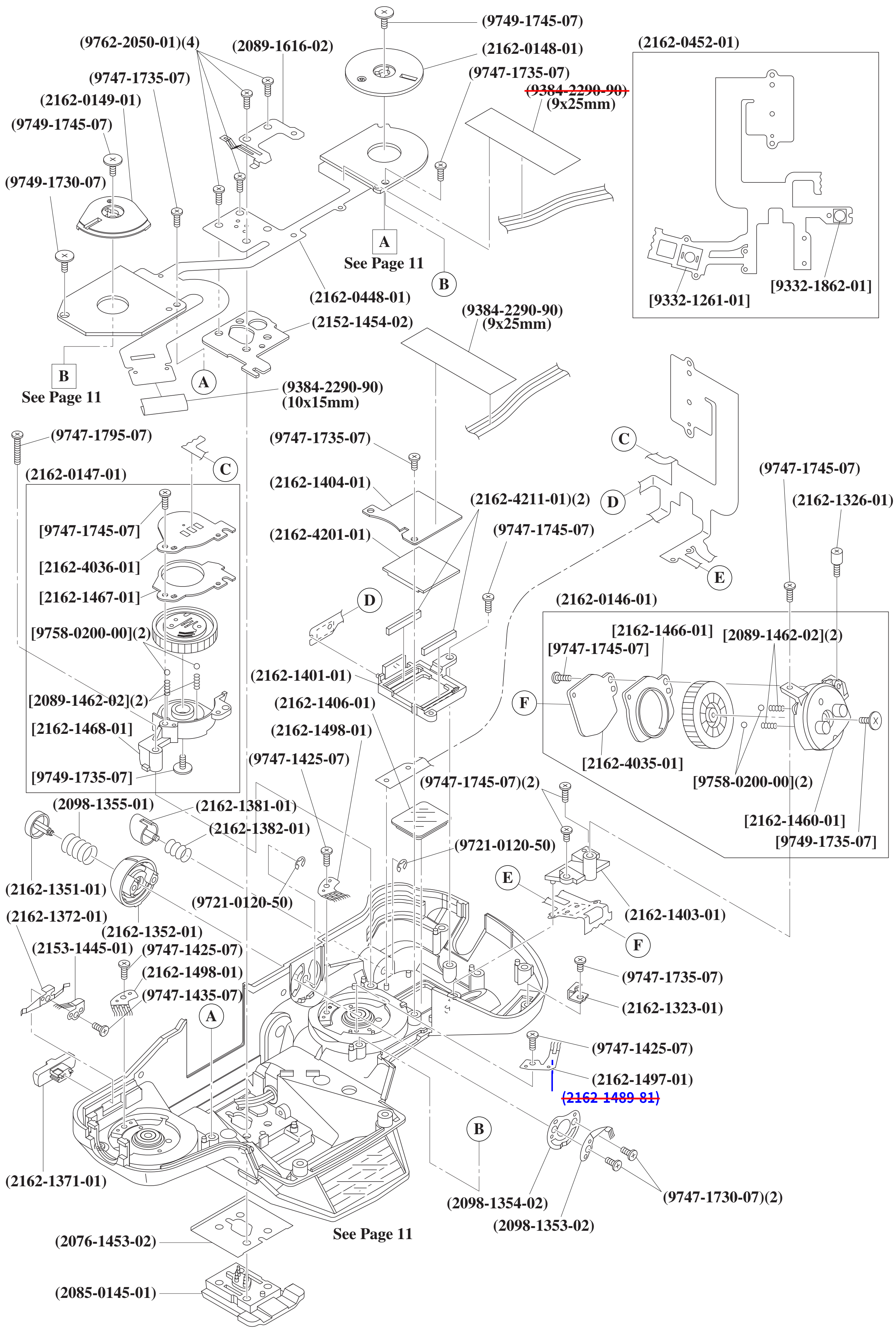
2162-0130-01



PART NO	PART NAME		QTY.
2162-0130-01	TOP COVER ASSY	上カバーセット	1
(2162-0166-01)	FLASH ASSY	発光部セット	1
[2162-1604-01]	FLASH PANEL	発光パネル	1
(2162-1402-01)	SHUTTER-RELEASE BUTTON	レリーズ釦	1
(2077-1418-01)	SHUTTER-RELEASE BUTTON SP	レリーズ釦ＳＰ	1
*(2162-1470-01)	EXPOSURE-COMPENSATION DIAL	露出ダイヤル	1
(2162-1470-04)	EXPOSURE-COMPENSATION DIAL	露出ダイヤル	1
(2162-1471-01)	FLASH-COMPENSATION DIAL	調光補正ダイヤル	1
(2162-1472-01)	EXPOSURE-COMPENSATION INDEX PLATE	露出補正文字板	1
*(2162-1473-01)	EXPOSURE-COMPENSATION LOCK RING	露出補正ロックリング	1
(2162-1473-02)	EXPOSURE-COMPENSATION LOCK RING	露出補正ロックリング	1
*(2162-1474-01)	DIAL OPERATION RING	露出補正起動リング	2
(2162-1474-03)	DIAL OPERATION RING	露出補正起動リング	2
(2162-1475-01)	DIAL CLICK PLATE	露出補正クリック板	1
(2162-1477-01)	DIAL CLICK SP	露出ダイヤルクリックＳＰ	6
(2162-1480-01)	EXPOSURE MODE DIAL	露出モードダイヤル	1
(2162-1481-01)	DRIVE MODE LEVER	ドライブモードダイヤル	1
(2162-1482-01)	EXPOSURE MODE INDEX PLATE	露出モード文字板	1
(2162-1483-01)	EXPOSURE MODE LOCK RING	露出モードロックリング	1
~~(2162-1484-8~~1)	EXPOSURE COMPENSATION DIAL SPACER	露出ダイヤルスペーサー	1
(2162-1485-01)	EXPOSURE MODE CLICK PLATE	露出モードクリック板	1
(2162-1487-01)	EXPOSURE MODE CLICK SP	露出モードクリックＳＰ	2
(2162-1488-01)	DIAL LOCK RELEASE BUTTON	ダイヤルロック解除釦	2
(2162-1490-01)	DIAL CLICK BASEPLATE	露出ダイヤルクリック板	2
(2162-1491-01)	EXPOSURE DIAL DECORATE RING	露出ダイヤル化粧リング	2
(2162-1493-01)	LOCK HOLD SP	ロックホールドＳＰ	2
(2162-1495-01)	DIAL CLICK BASEPLATE WASHER	露出ダイヤルクリック板ワッシャ	4
(2162-1496-01)	DIAL INDEX TAPE	露出ダイヤル文字板テープ	2
(2162-1499-01)	DIAL RUBBER RING	露出ダイヤルゴムリング	2
(2162-1601-01)	FLASH CASE (TOP)	発光部ケース（上）	1
(2162-1602-01)	FLASH CASE (BOTTOM)	発光部ケース（下）	1
(2089-1607-02)	SCREW	ねじ	1
(2162-1609-01)	FLASH SNAP ACTION SP	フラッシュスナップアクションSP	1
(2089-1610-01)	FLASH SHAFT (L)	回転軸（Ｌ）	1
(2089-1611-02)	FLASH SHAFT (R)	回転軸（Ｒ）	1
(2089-1613-02)	SCREW	ねじ	1
(2089-1620-01)	C-RING	Ｃリング	1
(2089-1621-01)	C-RING	Ｃリング	1
(2084-1622-02)	COVER PLATE-A	Ｆ飾り板Ａ	2
(9721-0120-50)	E-RING	Ｅリング	1
(9747-1425-07)	SCREW	ねじ	4
(9747-1435-07)	SCREW	ねじ	4
(9747-1745-07)	SCREW	ねじ	3
~~(9747-1745-1~~5)	SCREW	ねじ	3
(9758-0150-00)	STEEL BALL	スチールボール	8

12(2162)A

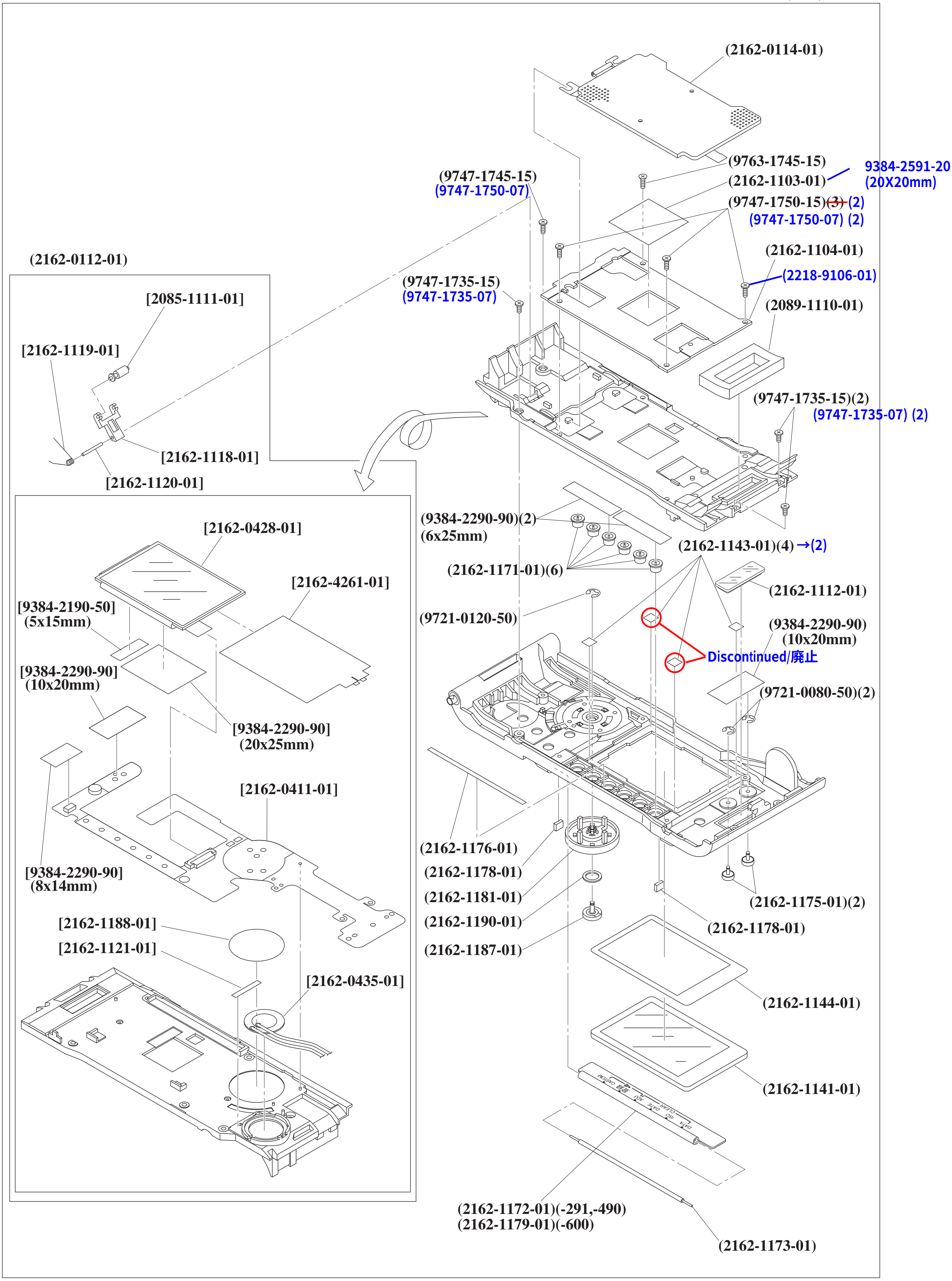
2162-0130-01



PART NO	PART NAME		QTY.
2162-0130-01	TOP COVER ASSY	上カバーセット	1
(2085-0145-01)	ACC. SHOE SET	アクセサリーシューセット	1
(2162-0146-01)	FRONT CONTROL DIAL ASSY	前ダイヤルホルダーセット	1
[2162-1460-01]	FRONT CONTROL DIAL HOLDER	前ダイヤルホルダー	1
[2089-1462-02]	DIAL SP	ダイヤルＳＰ	2
[2162-1466-01]	FRONT CONTROL DIAL DUSTPROOF PLATE	前ダイヤル防塵板	1
[2162-4035-01]	FRONT CONTROL DIAL PCB	前ダイヤル基板	1
[9747-1745-07]	SCREW	ねじ	1
[9749-1735-07]	SCREW	ねじ	1
[9758-0200-00]	STEEL BALL	スチールボール	2
(2162-0147-01)	REAR CONTROL DIAL ASSY	後ダイヤルホルダーセット	1
[2089-1462-02]	DIAL SP	ダイヤルＳＰ	2
[2162-1467-01]	REAR CONTROL DIAL DUSTPROOF PLATE	後ダイヤル防塵板	1
[2162-1468-01]	REAR CONTROL DIAL HOLDER	後ダイヤルホルダー	1
[2162-4036-01]	REAR CONTROL DIAL PCB	後ダイヤル基板	1
[9747-1745-07]	SCREW	ねじ	1
[9749-1735-07]	SCREW	ねじ	1
[9758-0200-00]	STEEL BALL	スチールボール	2
(2162-0148-01)	EXPOSURE MODE CONTACT HOLDER ASSY	露出モード接片ホルダーセット	1
(2162-0149-01)	EXPOSURE-COMPENSATION CONTACT HOLDER ASSY	露出補正接片ホルダーセット	1
(2162-0448-01)	FPC-H ASSY	Ｈフレキセット	1
(2162-0452-01)	FPC-V ASSY	Ｖフレキセット	1
[9332-1261-01]	SWITCH	ＳＷ	1
[9332-1862-01]	S103	Ｓ１０３	1
(2162-1323-01)	GRIP HOLDER HOOK PLATE	グリップホルダー掛かり板	1
(2162-1326-01)	GRIP BASEPLATE SCREW	グリップ台板ねじ	1
(2162-1351-01)	AEL BUTTON	ＡＥＬ釦	1
(2162-1352-01)	METERING MODE SWITCH	測光モード切換えレバー	1
(2098-1353-02)	METERING MODE CONTACT	測光モード接片	1
(2098-1354-02)	METERING MODE CLICK	測光モードクリック板	1
(2098-1355-01)	AE-LOCK BUTTON SP	ＡＥＬ釦ＳＰ	1
(2162-1371-01)	MAIN SW LEVER	メインＳＷレバー	1
(2162-1372-01)	MAIN SW CLICK PLATE	メインＳＷクリック板	1
(2162-1381-01)	AF/MF CONTROL BUTTON	ＡＦ／Ｍ釦	1
(2162-1382-01)	AF/MF CONTROL BUTTON SP	AF／M釦SP	1
(2162-1401-01)	LCD1 HOLDER	ボディLCD台板	1
(2162-1403-01)	SHUTTER RELEASE BUTTON BASEPLATE	レリーズ台板	1
(2162-1404-01)	LCD1 RETAINER	ボディＬＣＤ押え板	1
(2162-1406-01)	LCD1 WINDOW	ボディＬＣＤ窓	1
(2153-1445-01)	MAIN SWITCH CONTACT	メインスイッチ接片	1
(2076-1453-02)	SHOE BASE	シュー敷板	1
(2152-1454-02)	SHOE BASE	シュー取付け板	1
~~(2162-1489-81)~~	EXPOSURE MODE DIAL CONTACT SPACER	露出モード起動接片スペーサー	1
(2162-1497-01)	EXPOSURE MODE DIAL CONTACT	露出モード起動接片	1
(2162-1498-01)	DIAL CONTACT-A	露出ダイヤル接片Ａ	2
(2089-1616-02)	SFL CONTACT	ＳＦＬ接片	1
(2162-4201-01)	LCD1	ＬＣＤ１	1
(2162-4211-01)	LCD1 CONNECTOR RUBBER	ＬＣＤ１コネクターゴム	2
*(9384-2290-90)	POLYESTER TAPE (PER ROLL/60M) YELLOW	ポリエステルテープ	~~3~~ 2
(9721-0120-50)	E-RING	Ｅリング	2
(9747-1425-07)	SCREW	ねじ	3
(9747-1730-07)	SCREW	ねじ	2
(9747-1735-07)	SCREW	ねじ	5
(9747-1745-07)	SCREW	ねじ	4
(9749-1730-07)	SCREW	ねじ	1
(9749-1745-07)	SCREW	ねじ	2
(9762-2050-01)	SCREW	ねじ	4

13(2162)A

2162-0111-01(-291,-490)
2162-0118-01(-600)

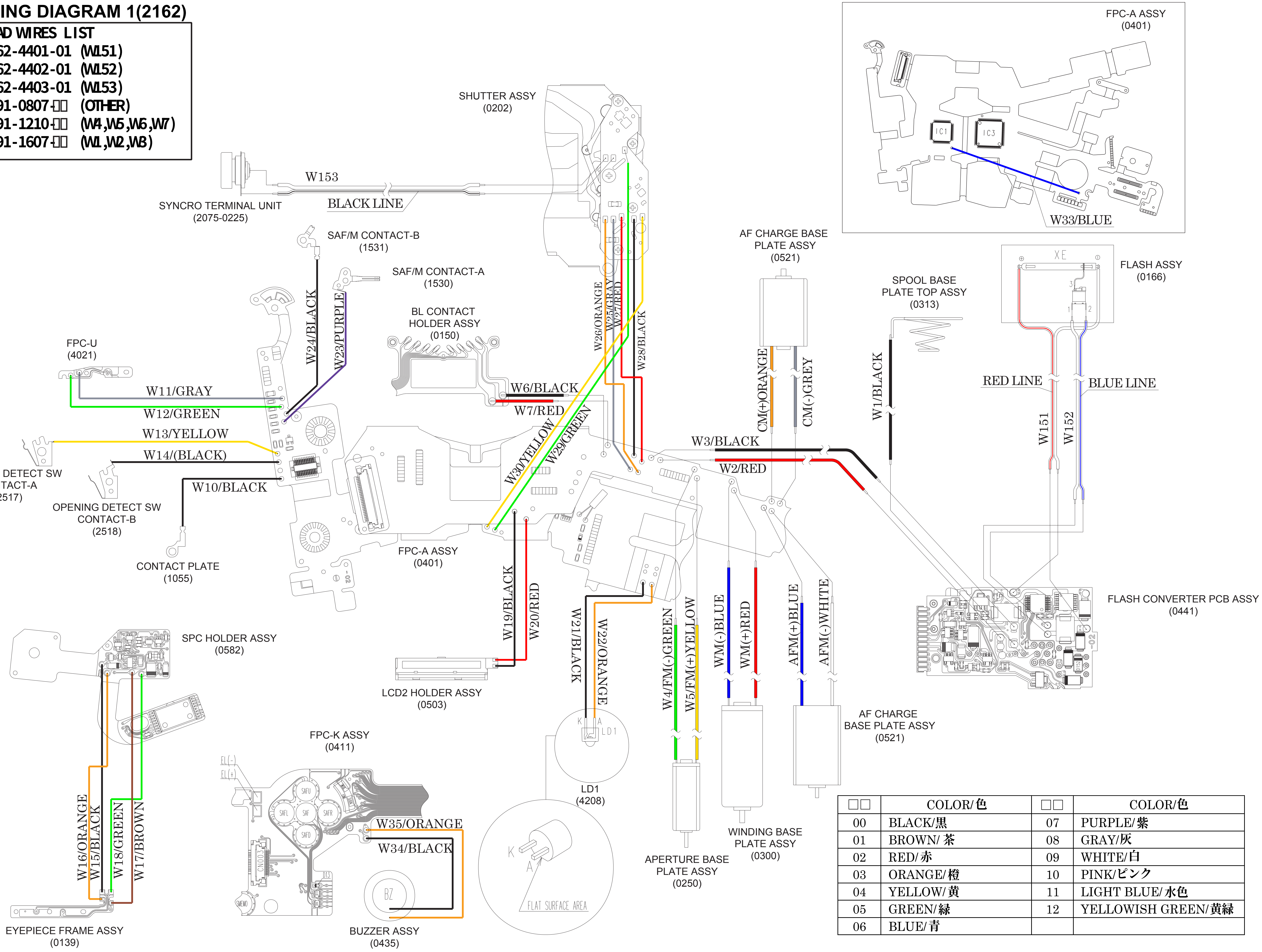


PART NO	PART NAME		QTY.
2162-0111-01	BACK COVER ASSY (-291, -490)	裏蓋セット	1
2162-0118-01	BACK COVER ASSY (-600)	裏蓋セット	
(2162-0112-01)	BACK COVER INNER PLATE ASSY	裏蓋台板セット	1
[2162-0411-01]	FPC-K ASSY	Ｋフレキセット	1
[2162-0428-01]	LCD3 ASSY	ＬＣＤ３セット	1
[2162-0435-01]	BUZZER ASSY	ブザーセット	1
[2085-1111-01]	BACK COVER ROLLER-2	裏蓋可動ローラー	1
[2162-1118-01]	BACK COVER SEPARATION PLATE	裏蓋可動板	1
[2162-1119-01]	BACK COVER SEPARATION PLATE SP	裏蓋可動板ＳＰ	1
[2162-1120-01]	BACK COVER SEPARATION HINGE SHAFT	裏蓋可動板ヒンジ軸	1
[2162-1121-01]	BACK COVER SEPARATION HINGE SHAFT TAPE	裏蓋可動板ヒンジ軸テープ	1
[2162-1188-01]	AF AREA BUTTON SHEET	ＡＦエリア釦シート	1
[2162-4261-01]	EL SHEET	ＥＬシート	1
[9384-2190-50]	DOUBLE-FACED TAPE (PER ROLL)	両面テープ	1
[9384-2290-90]	POLYESTER TAPE (PER ROLL/60M) YELLOW	ポリエステルテープ	3
(2162-0114-01)	PRESSURE PLATE ASSY	圧着板セット	1
~~(2162-1103-01~~)	BACK COVER LIGHT SHIELD TAPE	裏蓋カバー板遮光テープ	1
(2162-1104-01)	BACK COVER REINFORCING PLATE	裏蓋補強板	1
(2089-1110-01)	LIGHT SHIELD SPONGE	パト表示遮光片	1
(2162-1112-01)	FILM WINDOW	パト表示窓	1
(2162-1141-01)	BACK COVER LCD WINDOW	裏蓋ＬＣＤ窓	1
(2162-1143-01)	BACK COVER LCD LIGHT SHIELD TAPE	裏蓋ＬＣＤ窓遮光テープ	~~4~~ 2
(2162-1144-01)	BACK COVER LCD WINDOW TAPE	裏蓋ＬＣＤ窓貼付けテープ	1
(2162-1171-01)	CONTROL PANEL BUTTON	背面ＳＷ釦	6
(2162-1172-01)	CONTROL PANEL COVER (-291, -490)	裏蓋ＳＷ蓋	1
(2162-1179-02)	CONTROL PANEL COVER (-600)	裏蓋ＳＷ蓋	
(2162-1173-01)	CONTROL PANEL COVER HINGE	裏蓋ＳＷ蓋ヒンジ軸	1
(2162-1175-01)	DISPLAY BUTTON	表示切換え釦	2
(2162-1176-01)	CONTROL PANEL TAPE	裏蓋ＳＷテープ	1
(2162-1178-01)	CONTROL PANEL MG	背面SW蓋MG	2
(2162-1181-01)	FOCUS AREA SWITCH	ＡＦエリア選択釦	1
(2162-1187-01)	SPOT-AF BUTTON	ＡＦエリアセンター釦	1
(2162-1190-01)	FOCUS AREA SWITCH SHEET	ＡＦエリアセンターシート	1
(2218-9106-01)	SCREW	ねじ	1
(9384-2290-90)	POLYESTER TAPE (PER ROLL/60M) YELLOW	ポリエステルテープ	3
(9384-2591-20)	SCOTCH TAPE (PER ROLL)	テープ	1
(9721-0080-50)	E-RING	Ｅリング	2
(9721-0120-50)	E-RING	Eリング	1
(9747-1735-07)	SCREW	ねじ	3
~~(9747-1735-15~~)	SCREW	ねじ	3
~~(9747-1745-15~~)	SCREW	ねじ	1
(9747-1750-07)	SCREW	ねじ	3
~~*(9747-1750-15~~)	SCREW	ねじ	~~3~~ 2
(9763-1745-15)	SCREW	ねじ	1

■WIRING DIAGRAM 1(2162)

■ LEAD WIRES LIST

2162-4401-01 (W151)
2162-4402-01 (W152)
2162-4403-01 (W153)
9391-0807-□□ (OTHER)
9391-1210-□□ (W4,W5,W6,W7)
9391-1607-□□ (W1,W2,W3)



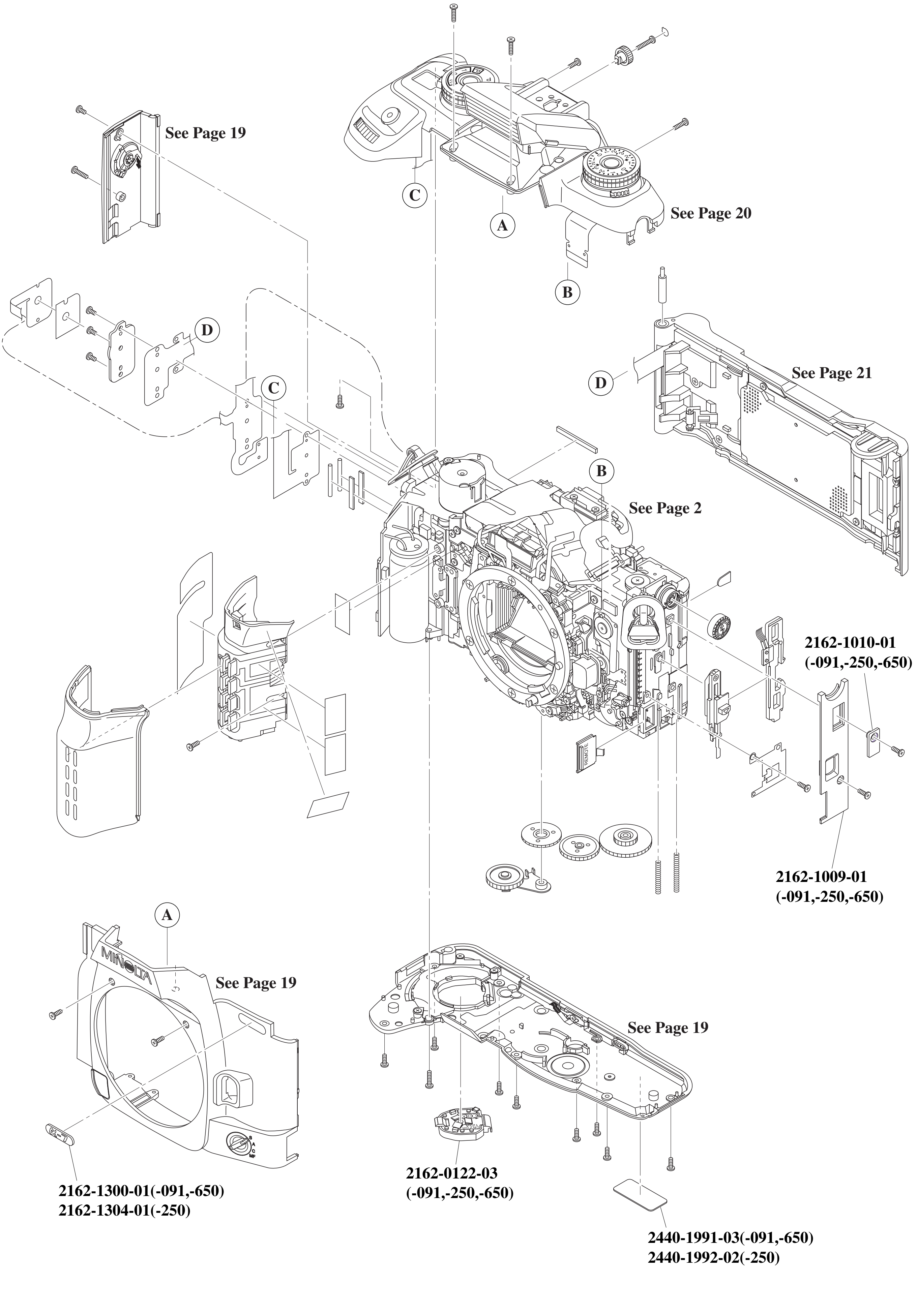
□□	COLOR/色	□□	COLOR/色
00	BLACK/黒	07	PURPLE/紫
01	BROWN/茶	08	GRAY/灰
02	RED/赤	09	WHITE/白
03	ORANGE/橙	10	PINK/ピンク
04	YELLOW/黄	11	LIGHT BLUE/水色
05	GREEN/緑	12	YELLOWISH GREEN/黄緑
06	BLUE/青		

The parts list (pg.15 - 21) contains only the exclusive parts for 2162-091, -250 and -650.
For parts not listed herein, refer to the parts list (pg.1 - 14) for 2162-291, -490 and -600.

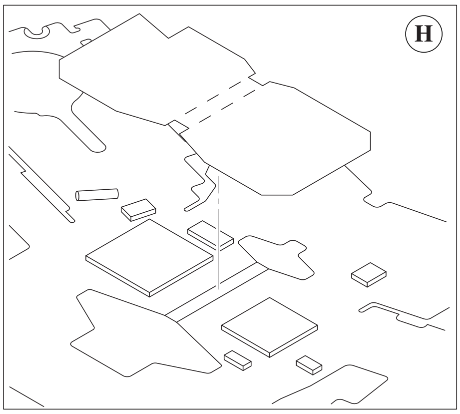
- **パーツリスト**P. 15 - P.21**は**“Limited” (2162-091, -250, -650)**の専用部品を記載しています。**
  “Limited”**の専用部品以外はパーツリスト**P. 1 - P.14**を参照して下さい。**

PAGE	PART NO	PART NAME		QTY.
21	2162-0110-01	BACK COVER ASSY (-250)	裏蓋セット	1
21	2162-0119-01	BACK COVER ASSY (-091, -650)	裏蓋セット	
16	2162-0122-03	BATTERY COVER ASSY (-091, -250, -650)	電池蓋セット	1
20	2162-0131-01	TOP COVER ASSY (-091, -250, -650)	上カバーセット	1
20	(2162-1494-01)	EXPOSURE MODE CHARACTER PLATE TAPE (-091, -250, -650)	露出モード文字板テープ	1
20	(2162-1476-01)	EXPOSURE MODE CHARACTER BASE PLATE (-091, -250, -650)	露出モード文字台板	1
20	(2162-1478-01)	EXPOSURE MODE CHARACTER PLATE (-091, -250, -650)	露出モード文字板	1
20	(2162-1479-01)	EXPOSURE-COMPENSATION INDEX PLATE (-091, -250, -650)	露出補正文字板	1
19	2162-0133-01	BOTTOM COVER ASSY (-091, -250, -650)	下カバーセット	1
19	2162-0137-01	FRONT COVER ASSY (-091, -650)	前カバーセット	1
19	2162-0138-01	FRONT COVER ASSY (-250)	前カバーセット	
19	2162-0164-01	WINDING SIDE COVER ASSY (-091, -250, -650)	巻上げ側サイドカバーセット	1
18	2162-0225-01	SYNCRO TERMINAL ASSY (-091, -250, -650)	シンクロターミナルセット	1
17	2162-0409-01	FPC-A ASSY (-091, -250, -650)	Aフレキセット	1
17	(9332-1862-01)	SW	SW	1
16	2162-1009-01	REWINDING SIDE COVER-A (-091, -250, -650)	巻戻し側サイドカバーA	3
16	2162-1010-01	REWINDING SIDE COVER-B (-091, -250, -650)	巻戻し側サイドカバーB	1
16	2162-1300-01	VERSION NAME PLATE (-091, -650)	銘板	1
16	2162-1304-01	VERSION NAME PLATE (-250)	銘板	1
16	2440-1991-03	SERIAL NUMBER PLATE (JAPAN) (-091, -650)	ボディＮＯ．プレート	1
16	2440-1992-02	SERIAL NUMBER PLATE (OSAKA JAPAN) (-250)	ボディＮＯ．プレート	

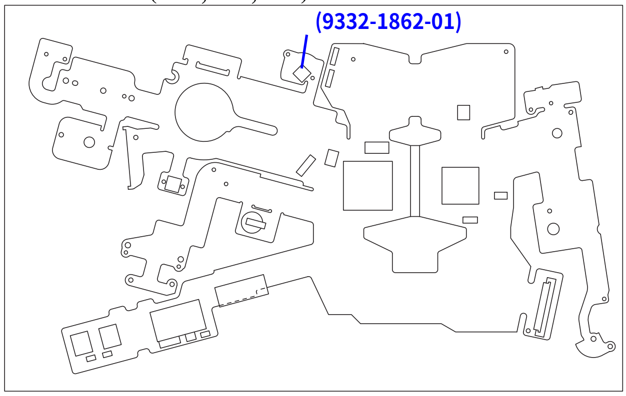
PARTS LIST

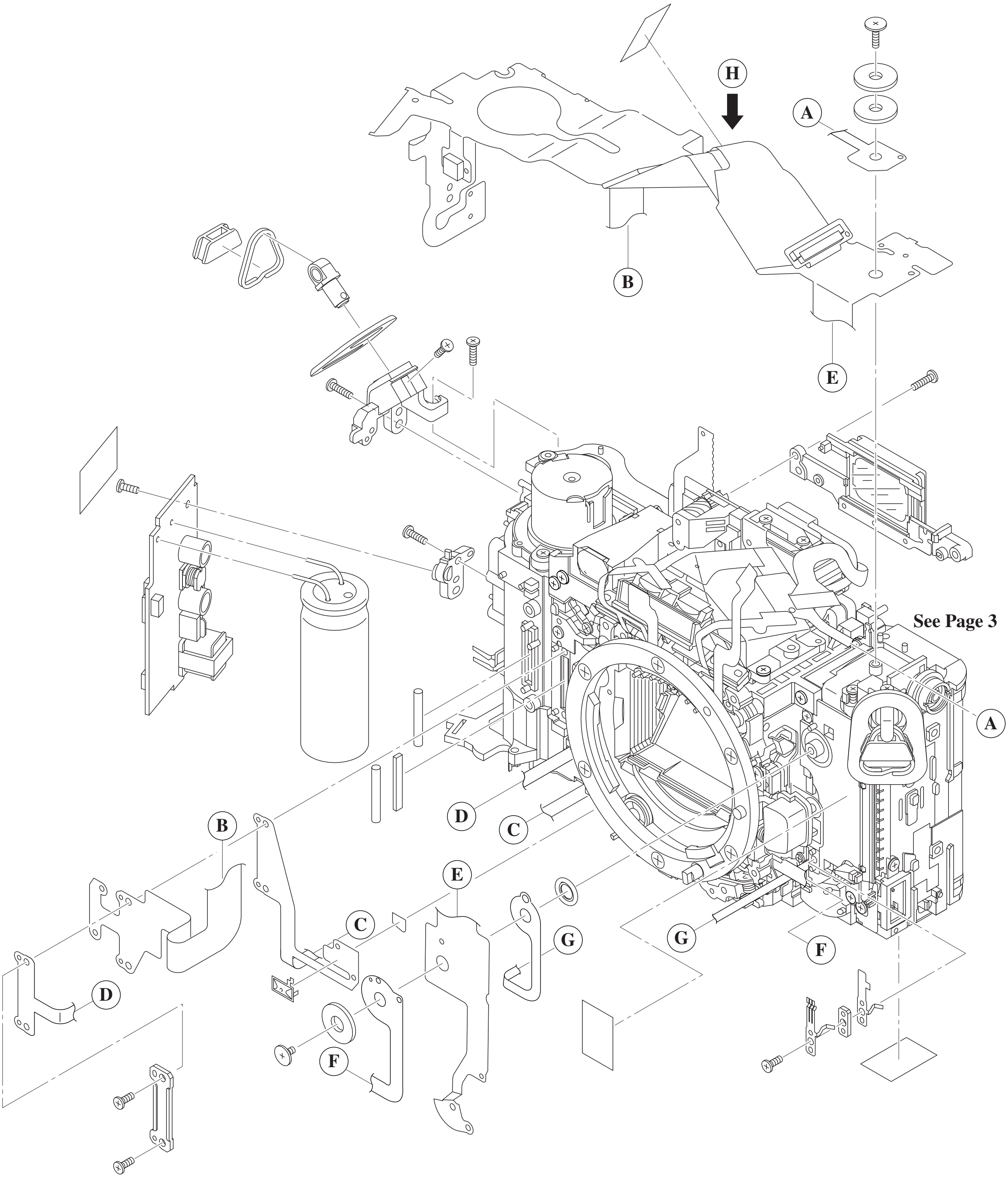


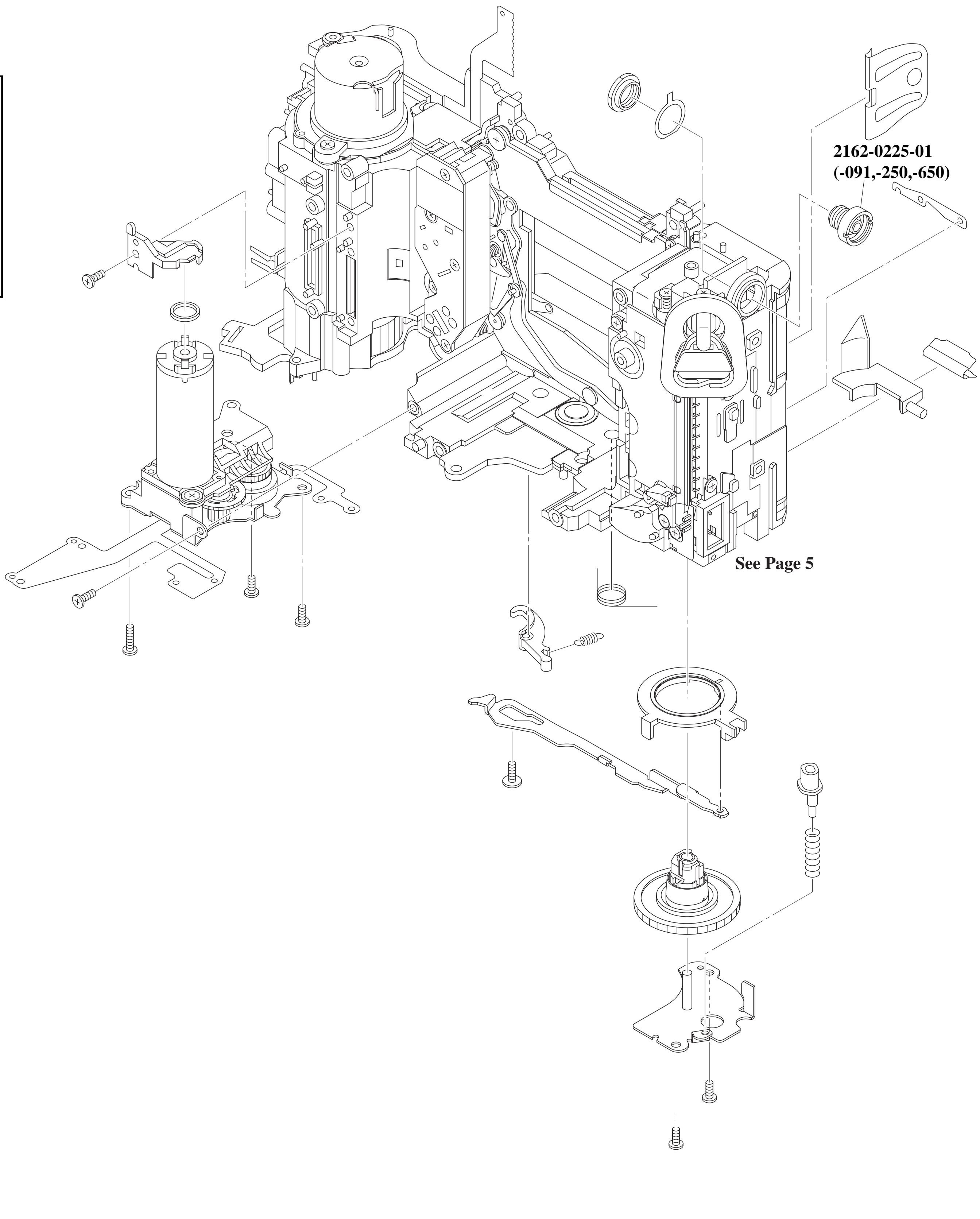
See Page 19
See Page 20
See Page 21
See Page 2
See Page 19
See Page 19
A
B
C
D
2162-1010-01
(-091,-250,-650)
2162-1009-01
(-091,-250,-650)
2162-1300-01(-091,-650)
2162-1304-01(-250)
2162-0122-03
(-091,-250,-650)
2440-1991-03(-091,-650)
2440-1992-02(-250)

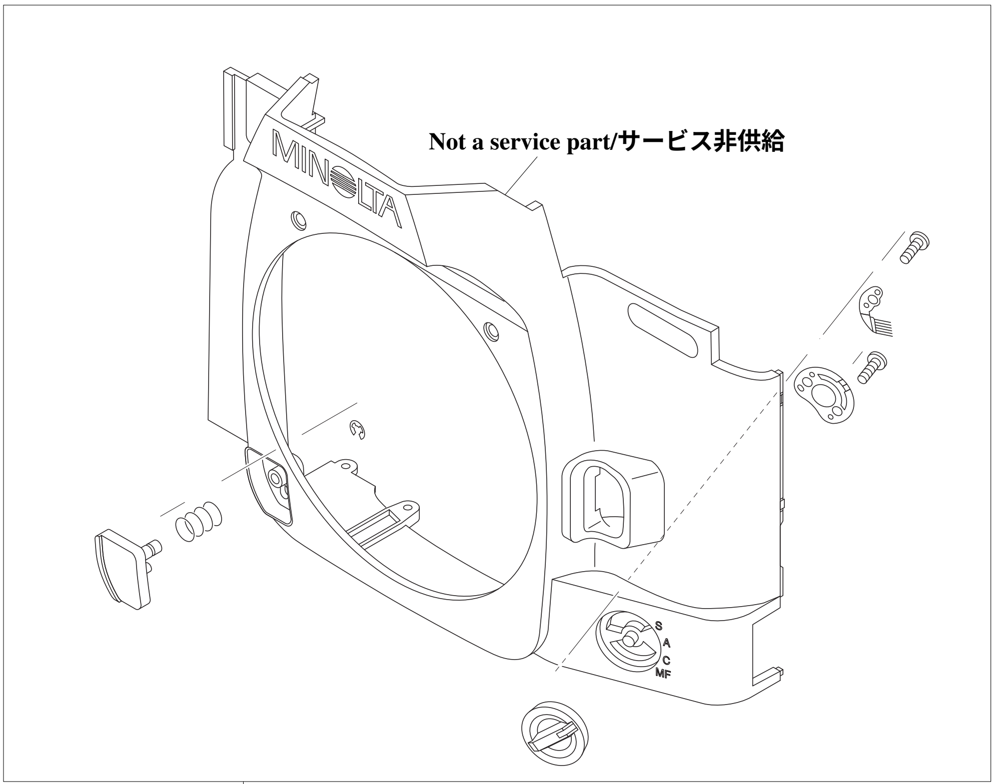


2162-0409-01 (-091,-250,-650)



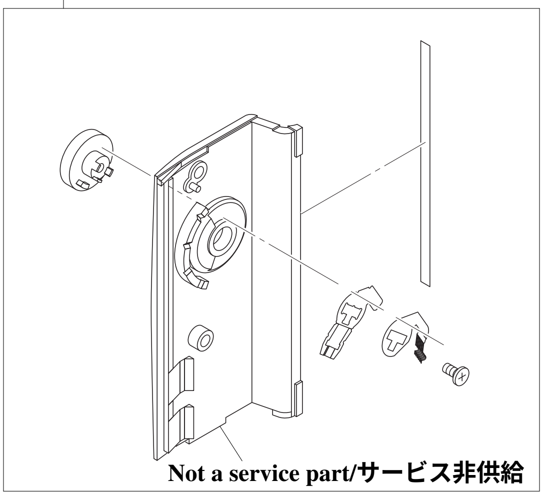



2162-0225-01
(-091,-250,-650)
See Page 5

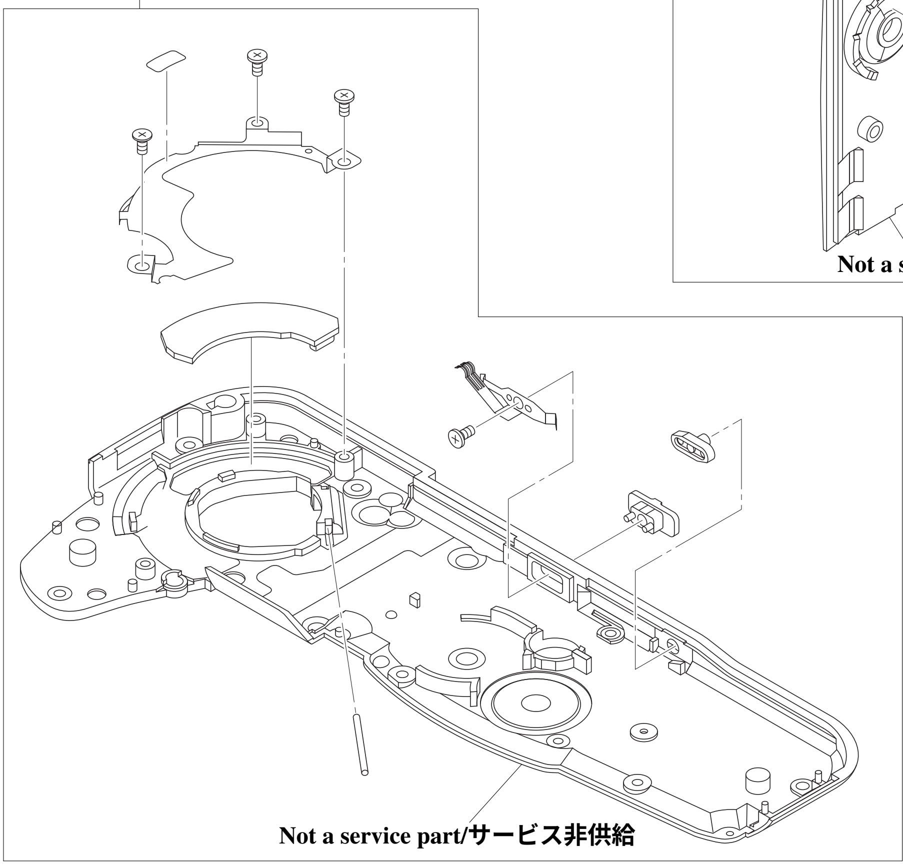


2162-0137-01(-091,-650)
2162-0138-01(-250)
See page 10 for details.
子部品展開はP. 10参照。

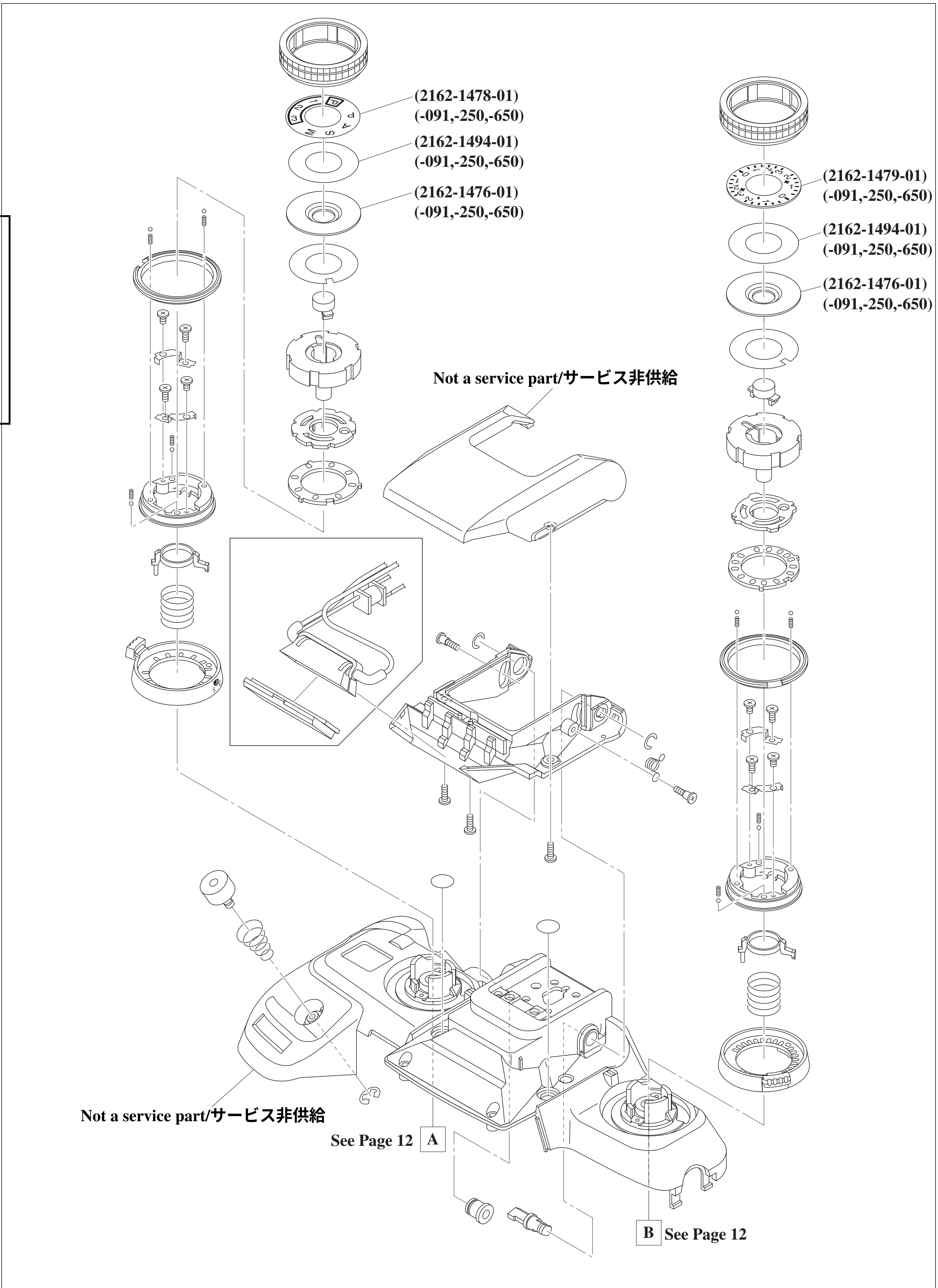
2162-0164-01(-091,-250,-650)
See page 10 for details.
子部品展開はP. 10参照。



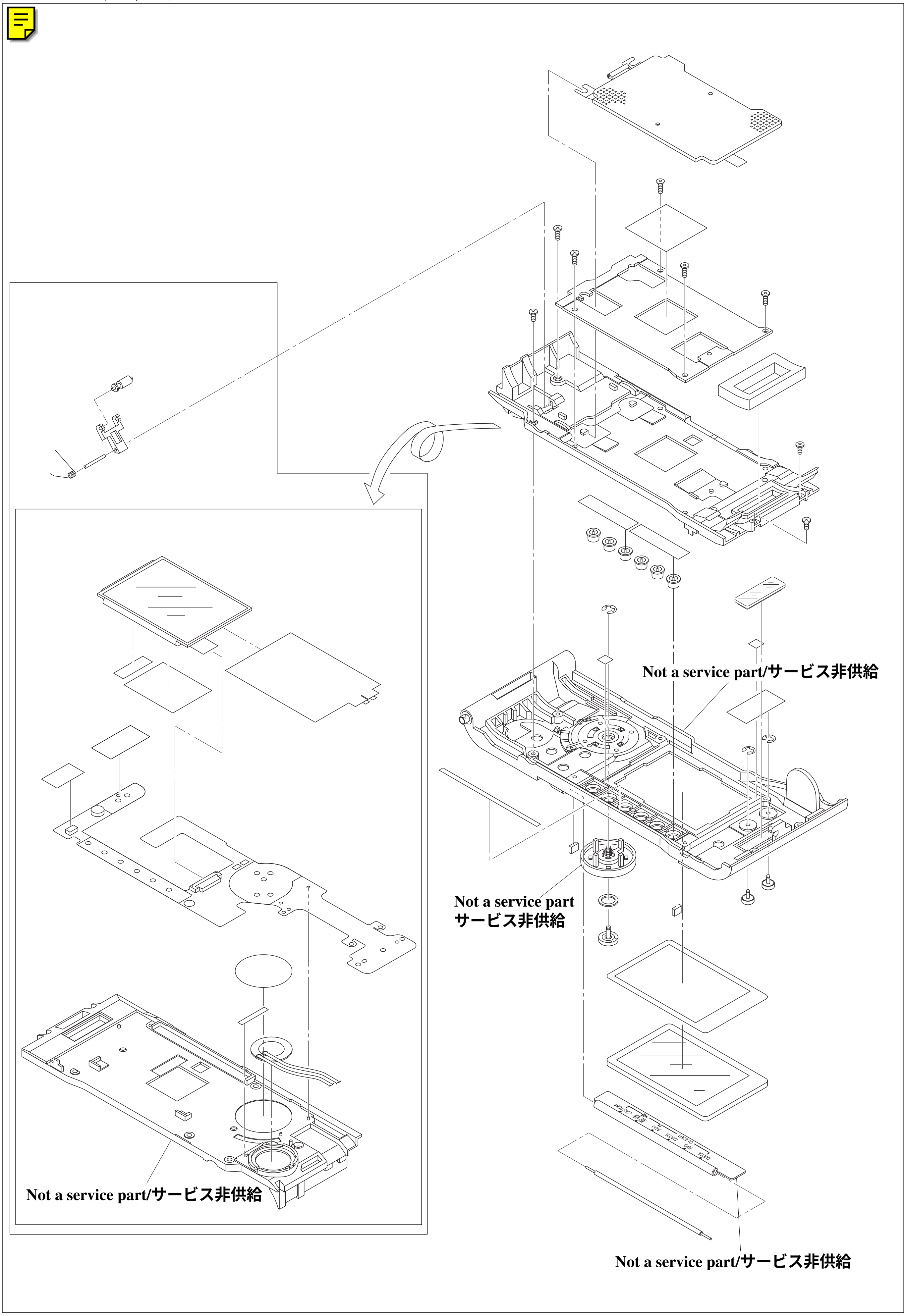
2162-0133-01(-091,-250,-650
See page 10 for details.
子部品展開はP. 10参照。



2162-0131-01 (-091,-250,-650)　See page 10, 12 for details./子部品展開はＰ．11，12参照。



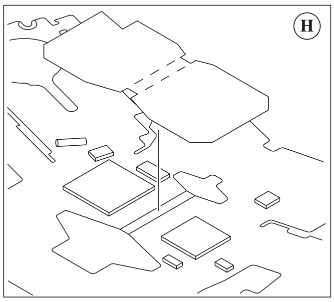
2162-0110-01(-250)
2162-0119-01(-091,-650) See page 13 for details./子部品展開はP．13参照。



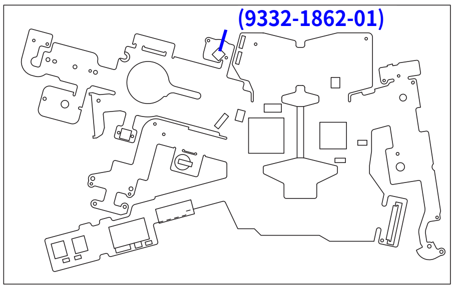
■This parts list contains only the exclusive parts for 2162-092.
For parts not listed herein, refer to the parts list (pg. 1 -14) for 2162-600.
IC1 and IC3 on 2162-0403-01 store the special firmware for Chinese navigation model (2162-092).
The order of 2162-0403-01 from the service center that does not have the firmware installer is only acceptable.
IC1 and IC3 on 2162-0409-01 store the firmware for the Limited models (2162-091, -250, -650).
For the service center that has the firmware installer, place the order for 2162-0409-01 and overwrite the correct firmware with the firmware installer.

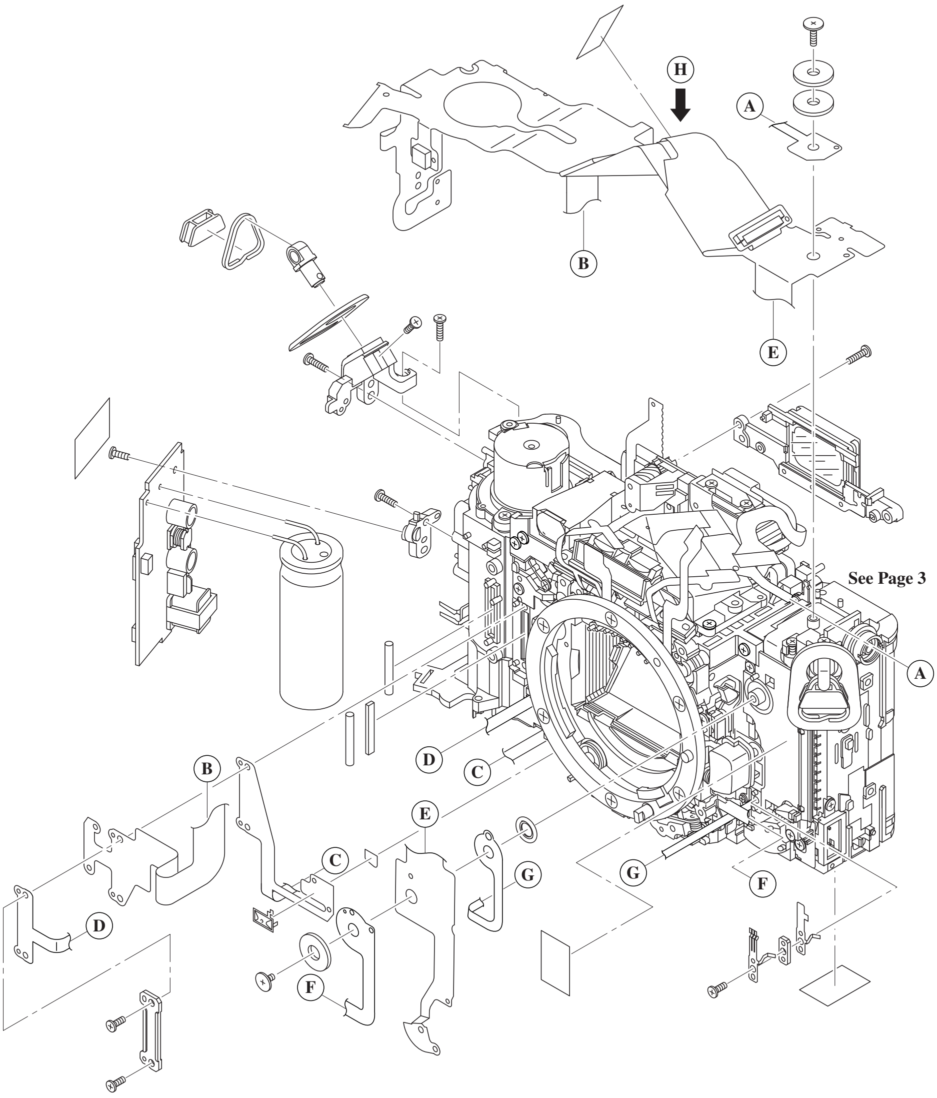
■このパーツリストは、 2162-092の専用部品をまとめたものです。
このパーツリスト以外の部品は、 2162-600と共通です。
2点の Aフレキセットを設定しますが、サービス拠点により以下のように部品を手配 /使用して下さい。
ソフト書換え設備のあるサービス拠点： 2162-0409-01をソフトを書換え使用する。
ソフト書換え設備のないサービス拠点： 2162-0403-01を使用する。

PART NO	PART NAME		QTY.
2162-0403-01	FPC-A ASSY (-092)	Aフレキセット	1
2162-0409-01	FPC-A ASSY (-091, -092, -250, -650)	Aフレキセット	1
(9332-1862-01)	SW	SW	1



2162-0403-01 (-092)
2162-0409-01 (-091, -092, -250, -650)





REF No. 管理No.	QS FA 2162-P001

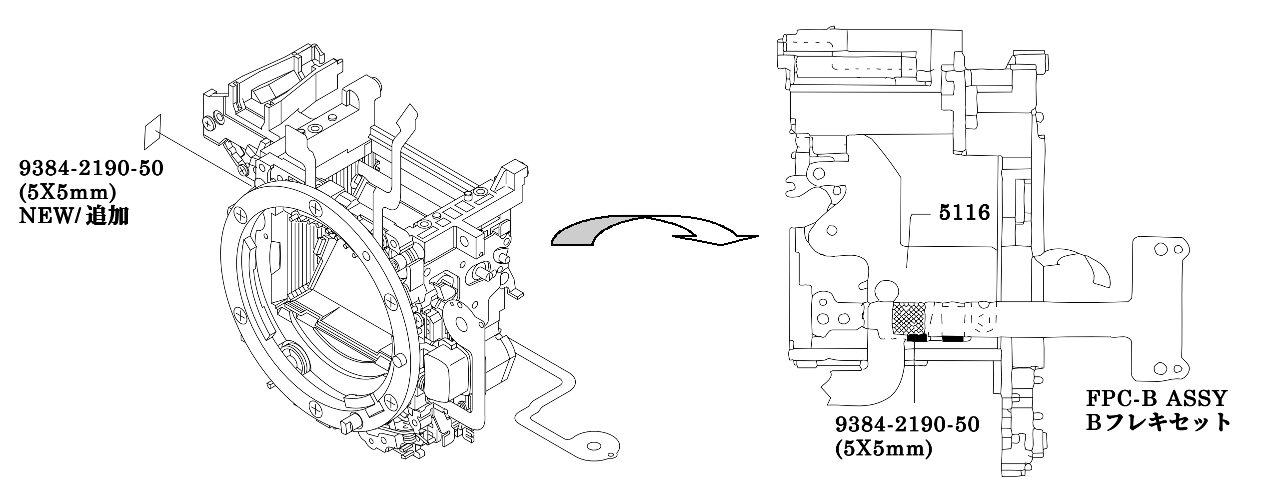
PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	December 21. 2000

Approved by 承認	Verified by 審査	Written by 作成

Parts List　P. 7　　2162-662

REASON 変更理由	Bフレキ整理用			COMMON MODEL 共通機種	2162-Series	
	To improve FPC-B arrangement					
Previous	ーーーーーーー	ーー	ーー	9384-2190-50		New



REF No. 管理No.	QS FA 2162-P002

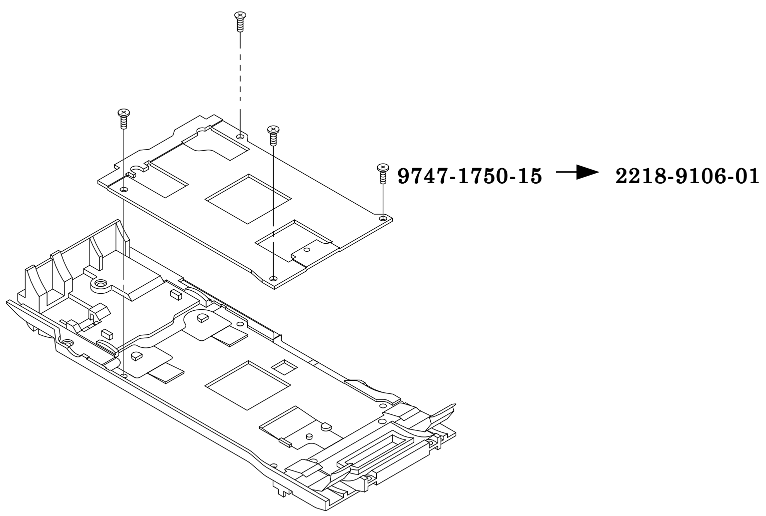
PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	December 21. 2000

Approved by 承認	Verified by 審査	Written by 作成

Parts List　P. 13　　2162-722

REASON 変更理由	圧着板とねじの干渉防止			COMMON MODEL 共通機種	2162-Series	
	To prevent contact between the pressure plate and the screw					
Previous	9747-1750-15	→○	×←	2218-9106-01		New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P003

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	December 21. 2000

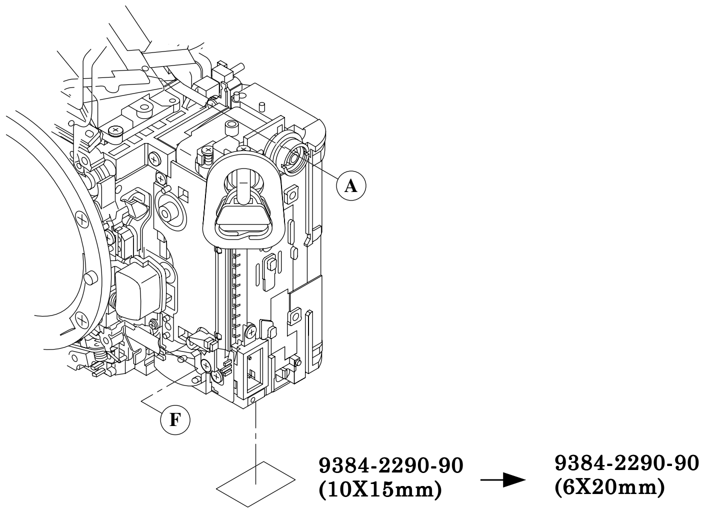
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

2162-724

REASON 変更理由	リード線整理の改善 To improve lead wire arrangement	COMMON MODEL 共通機種	2162-Series

Previous	9384-2290-90	——	——	9384-2290-90	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P004

PARTS MODIFICATION LIST

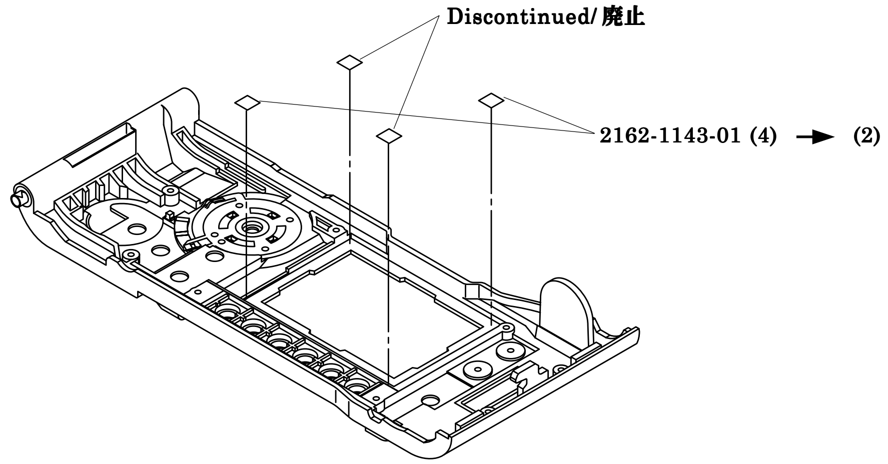
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	January 16. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 13

2162-752

REASON 変更理由	コストダウン To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	2162-1143-01	――	――	2162-1143-01	New



REF No. 管理No.	QS FA 2162-P005

PARTS MODIFICATION LIST

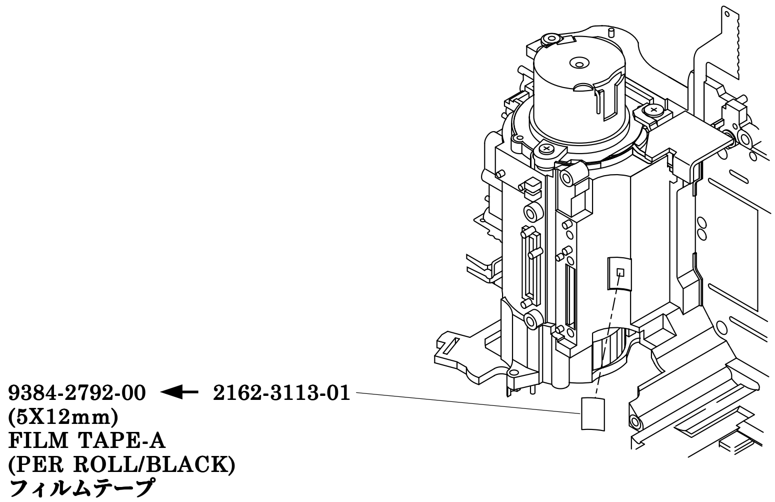
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	January 16. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 5

2162-753

REASON 変更理由	コストダウン To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	2162-3113-01	→○	○←	9384-2792-00	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P006

PARTS MODIFICATION LIST

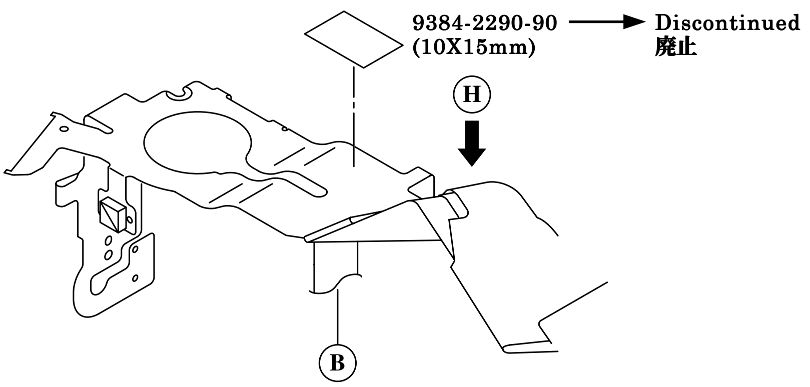
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

仮-742

REASON 変更理由	コストダウン To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	9384-2290-90	——	——	———————	New



REF No. 管理No.	QS FA 2162-P007

PARTS MODIFICATION LIST

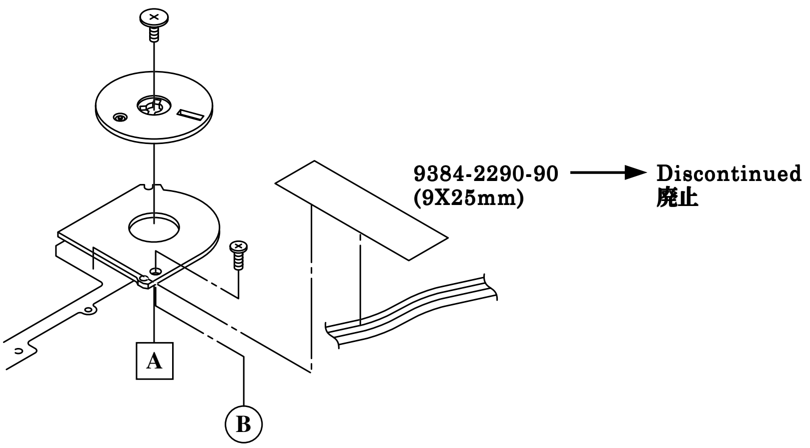
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 12

仮-743

REASON 変更理由	コストダウン To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	9384-2290-90	——	——	———————	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P008

PARTS MODIFICATION LIST

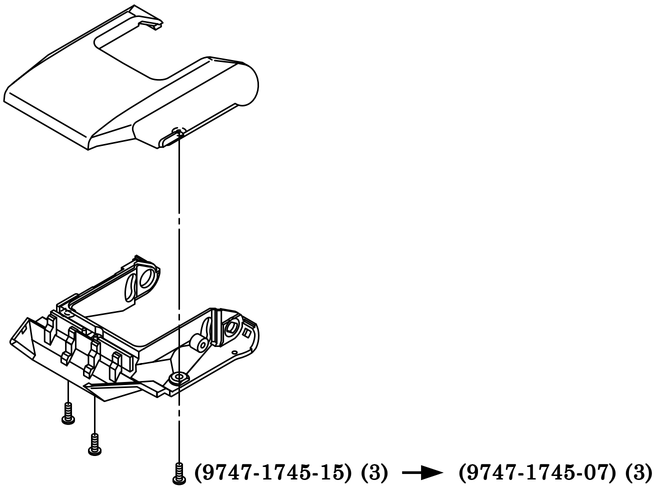
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 11

2162-755-760

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series		
Previous	9747-1745-15	→○	○←	9747-1745-07	New



REF No. 管理No.	QS FA 2162-P009

PARTS MODIFICATION LIST

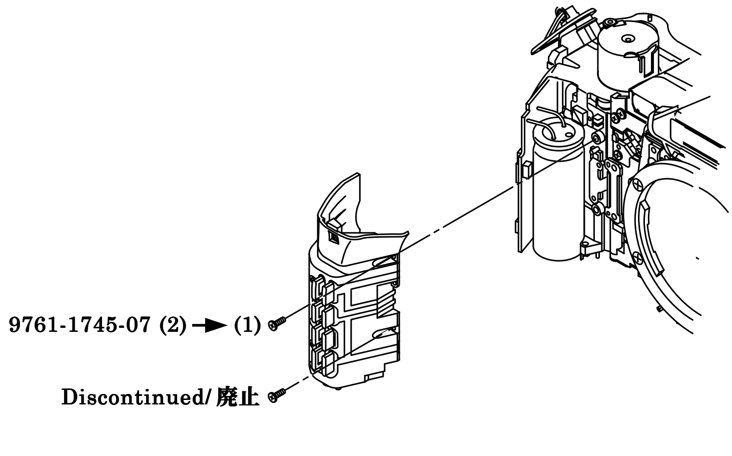
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 1

2162-755-760

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series		
Previous	9761-1745-07	——	——	———————	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P010

PARTS MODIFICATION LIST

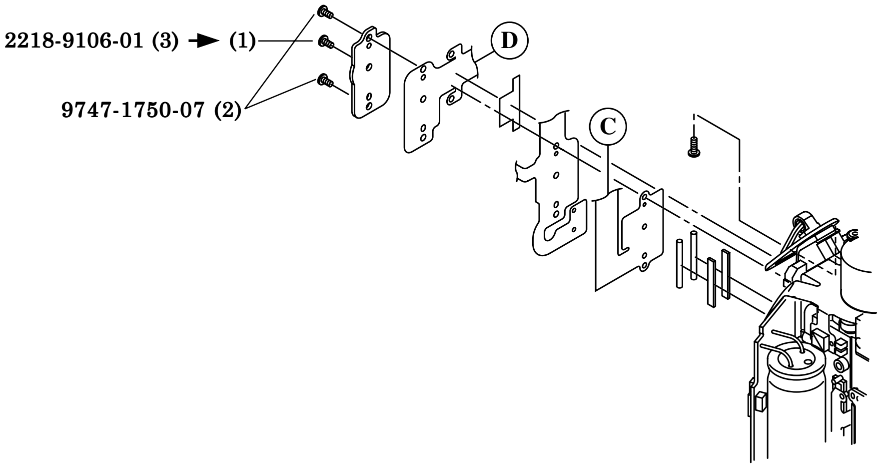
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 1

2162-755-760

REASON 変更理由	コストダウン / To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	2218-9106-01	→○	○←	9761-1745-07	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P011

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

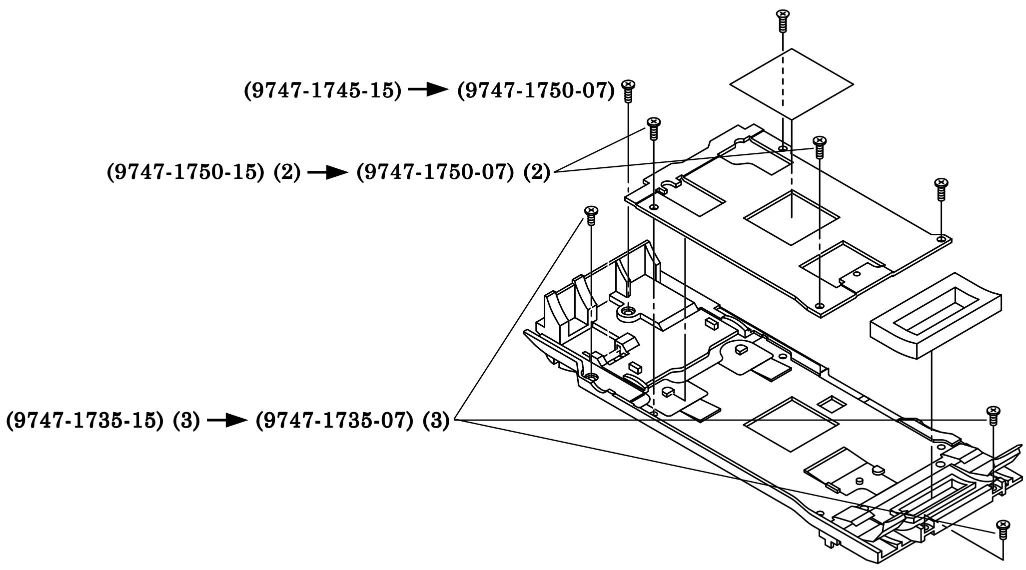
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 13

2162-755-760

REASON 変更理由	コストダウン / To cut cost	COMMON MODEL 共通機種	2162-Series	

Previous	9747-1735-15	→○	○←	9747-1735-07	New
Previous	9747-1745-15	→○	○←	9747-1750-07	New
Previous	9747-1750-15	→○	○←	9747-1750-07	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P012

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

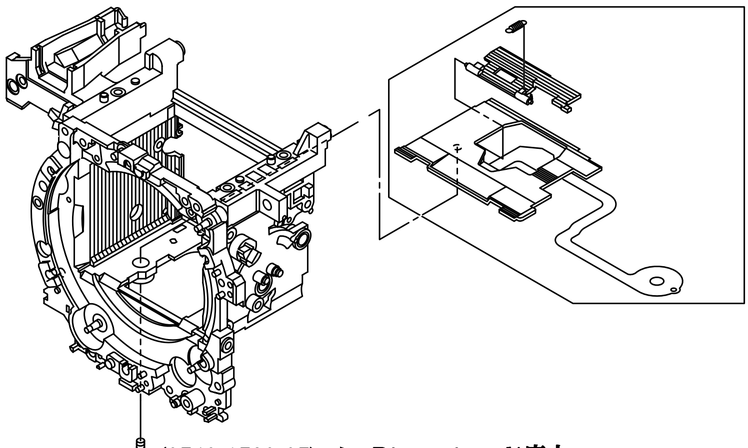
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 9

2162-755-760

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series

Previous	9749-1730-07	——	——	———————	New



REF No. 管理No.	QS FA 2162-P013

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

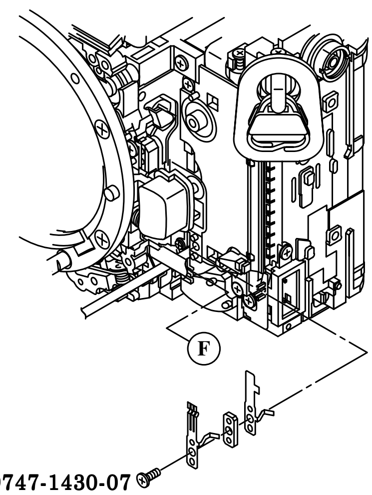
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

2162-755-760

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series

Previous	9747-1435-07	→○	○←	9747-1430-07	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P014

PARTS MODIFICATION LIST

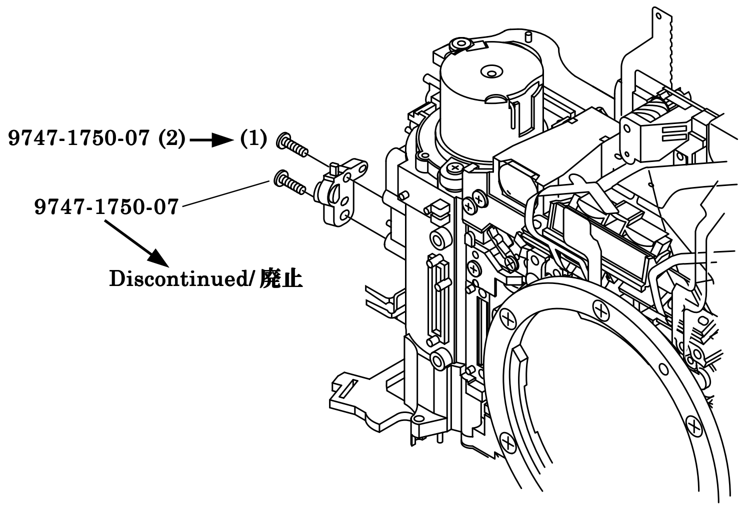
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

2162-755-760

REASON 変更理由	コストダウン			COMMON MODEL 共通機種	2162-Series
	To cut cost				
Previous	9747-1750-07	——	——	———————	New



REF No. 管理No.	QS FA 2162-P015

PARTS MODIFICATION LIST

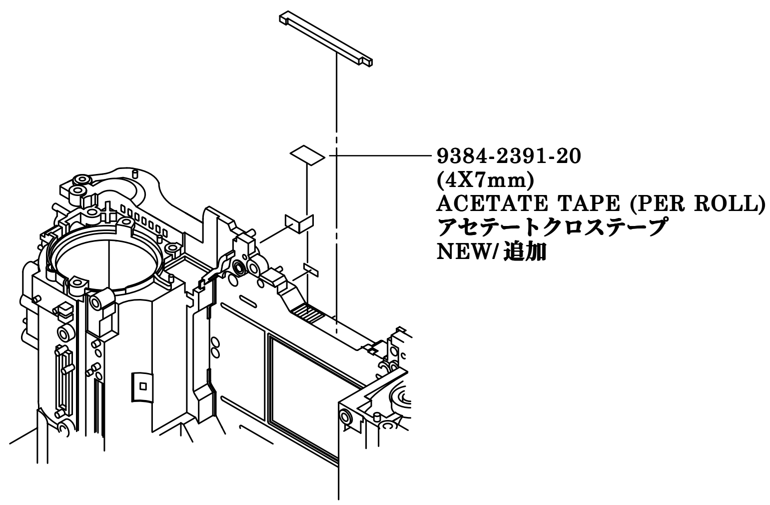
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 6

2162-767

REASON 変更理由	光漏れ防止			COMMON MODEL 共通機種	2162-Series
	To prevent light leak				
Previous	———————	——	——	9384-2391-20	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P016

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

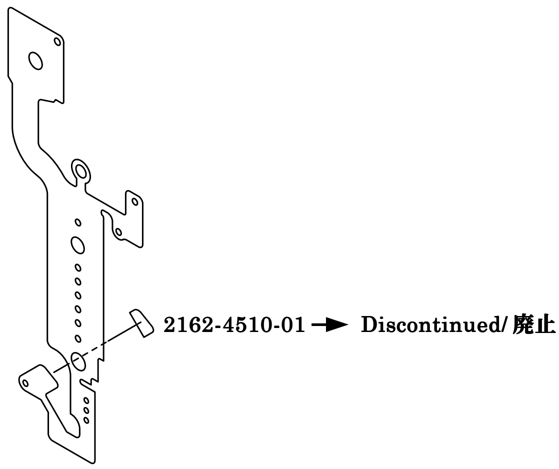
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 5

2162-772

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series

Previous	2162-4510-01	——	——	———————	New



REF No. 管理No.	QS FA 2162-P017

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

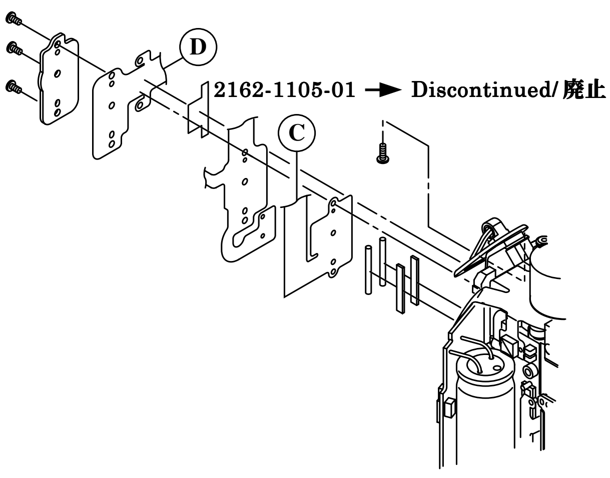
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 1

2162-773

REASON 変更理由	コストダウン To cut cost	COMMON MODEL 共通機種	2162-Series

Previous	2162-1105-01	——	——	———————	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P018

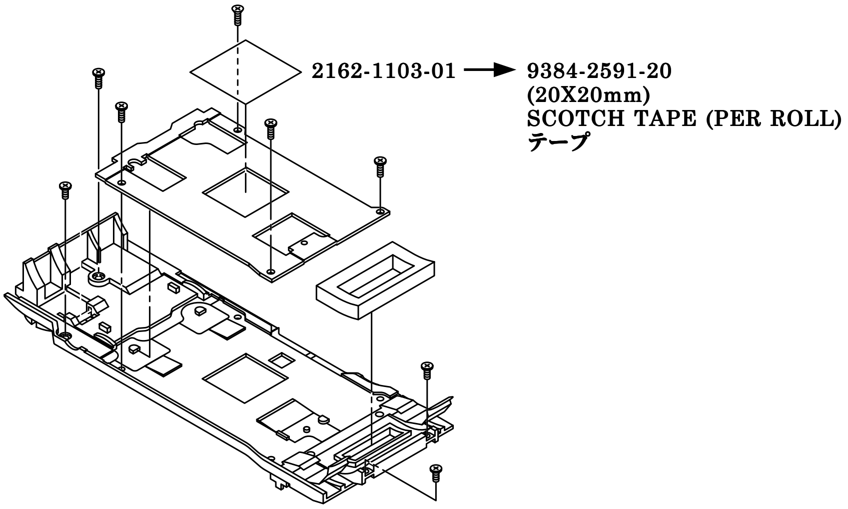
PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 13 2162-765

REASON 変更理由	コストダウン / To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	2162-1103-01	→○	○←	9384-2591-20	New



REF No. 管理No.	QS FA 2162-P019

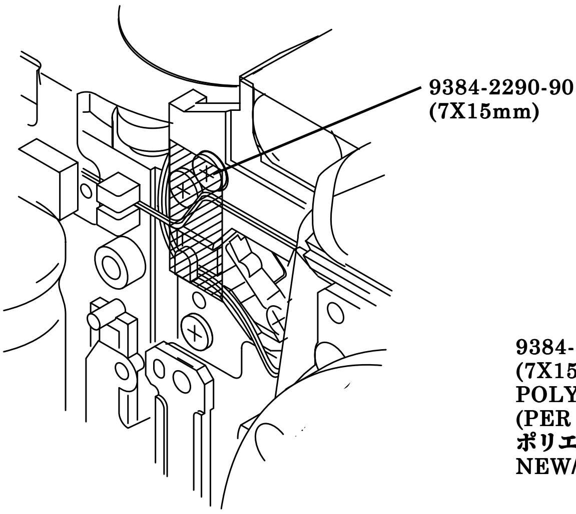
PARTS MODIFICATION LIST

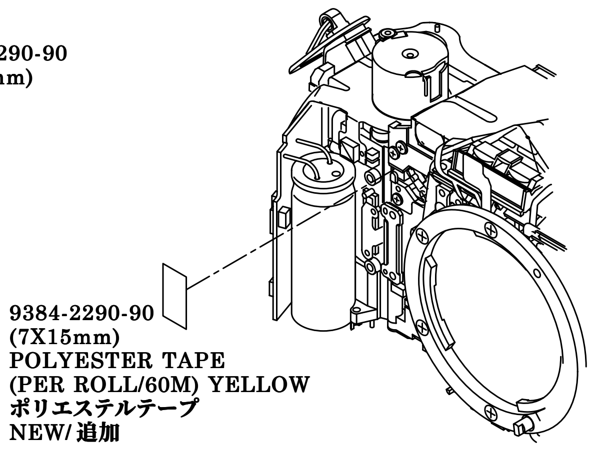
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	February 27. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 1 仮-744

REASON 変更理由	リード線整理 / To protect wires			COMMON MODEL 共通機種	2162-Series
Previous	———————	——	——	9384-2290-90	New





■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P020

PARTS MODIFICATION LIST

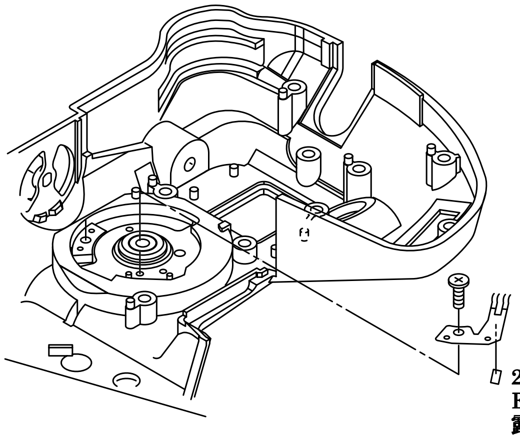
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 12

2162-576

REASON 変更理由	露出モード起動接片ONせずの改善 To ensure exposure mode dial operation.			COMMON MODEL 共通機種	2162-Series
Previous	―――――――	――	――	2162-1489-81	New



REF No. 管理No.	QS FA 2162-P021

PARTS MODIFICATION LIST

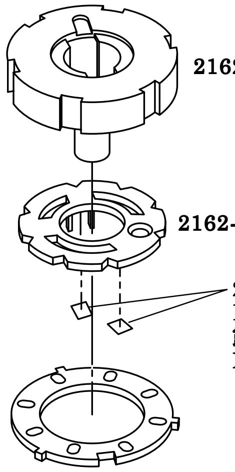
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 11

2162-611

REASON 変更理由	露出ダイヤル接片A ONせずの改善 To ensure exposure-compensation dial operation.			COMMON MODEL 共通機種	2162-Series
Previous	―――――――	――	――	2162-1484-81	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P022

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

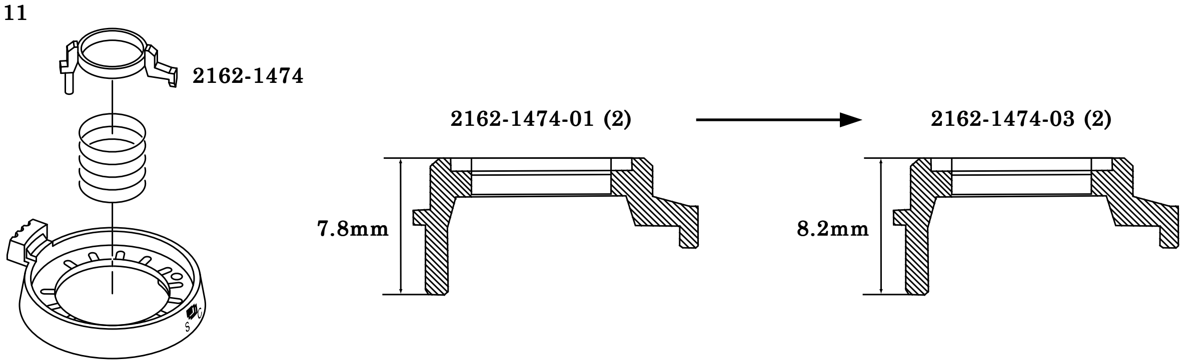
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 11, 12

2162-614

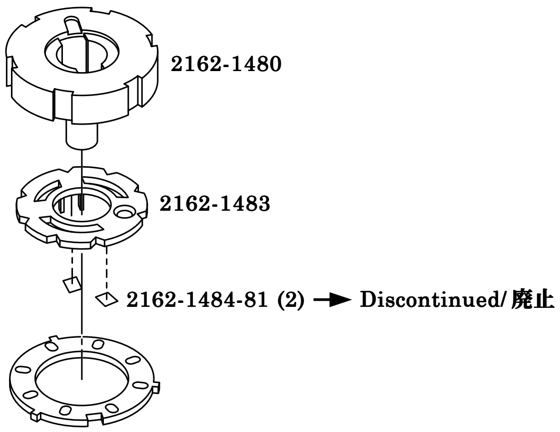
REASON 変更理由	生産都合 For efficient production			COMMON MODEL 共通機種	2162-Series
Previous	2162-1474-01	→×	×←	2162-1474-03	New

P. 11



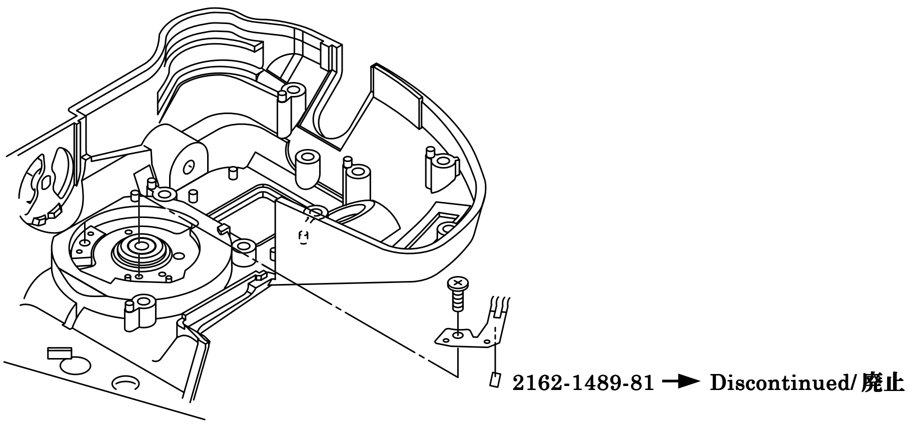
~~Previous~~	2162-1484-81	——	——	———————	New

P. 11



~~Previous~~	2162-1489-81	——	——	———————	New

P. 12



Interchangeability as a set/セットでの互換性	Previous	→○	○←	New

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P023

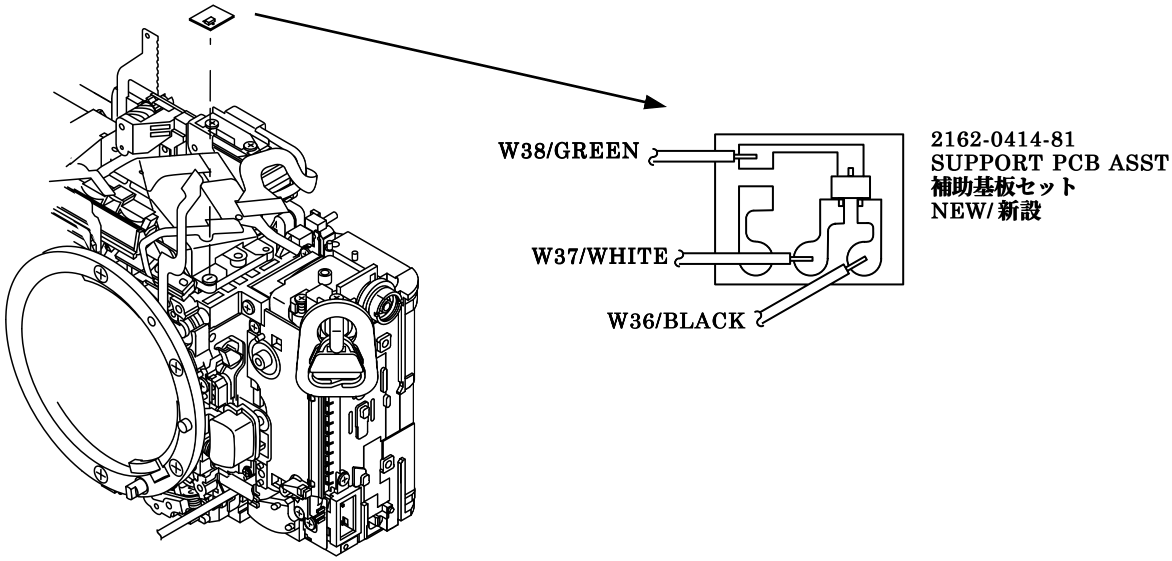
PARTS MODIFICATION LIST

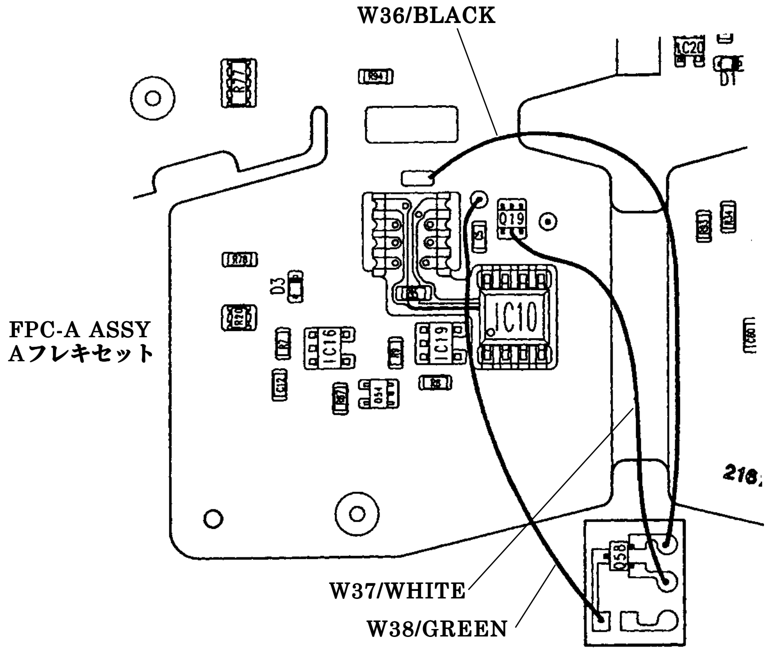
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2 | 2162-648, 650

REASON 変更理由	AF合焦せずの改善 To ensure focus operation.			COMMON MODEL 共通機種	2162-Series
Previous	――――――	――	――	2162-0414-81	New
Previous	――――――	――	――	(9391-0807-00):W36	New
Previous	――――――	――	――	(9391-0807-09):W37	New
Previous	――――――	――	――	(9391-0807-05):W38	New





■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P024

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

Approved by 承認	Verified by 審査	Written by 作成

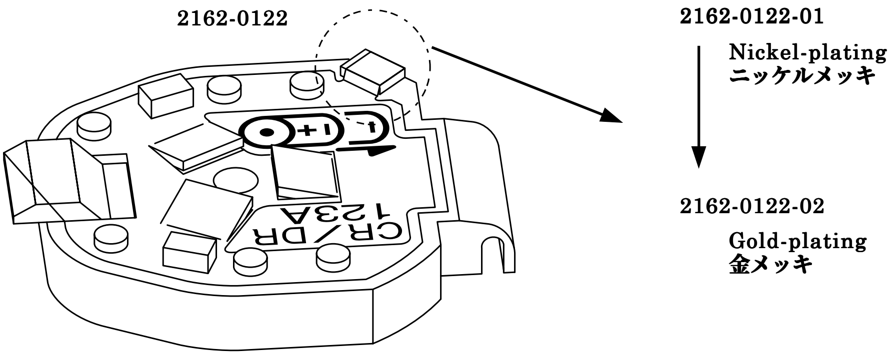
Parts List P. 1, 6

2162-750

REASON 変更理由	電池接片の接触効率の改善 To ensure battery contact conductivity.	COMMON MODEL 共通機種	2162-Series

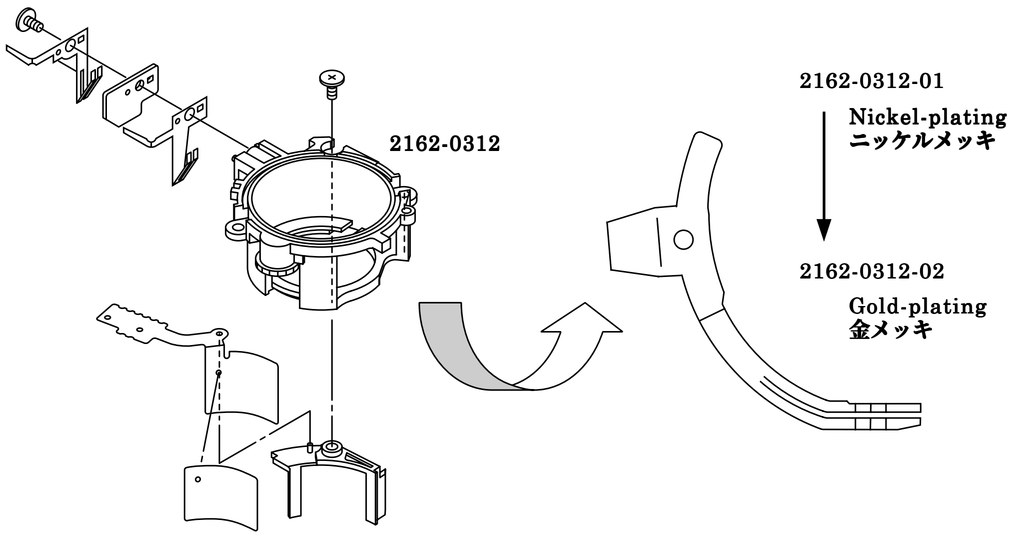
Previous	2162-0122-01	→×	×←	2162-0122-02	New

P. 1



Previous	2162-0312-01	→×	×←	2162-0312-02	New

P. 6



Interchangeability as a set/セットでの互換性	Previous	→○	×←	New

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P025

PARTS MODIFICATION LIST

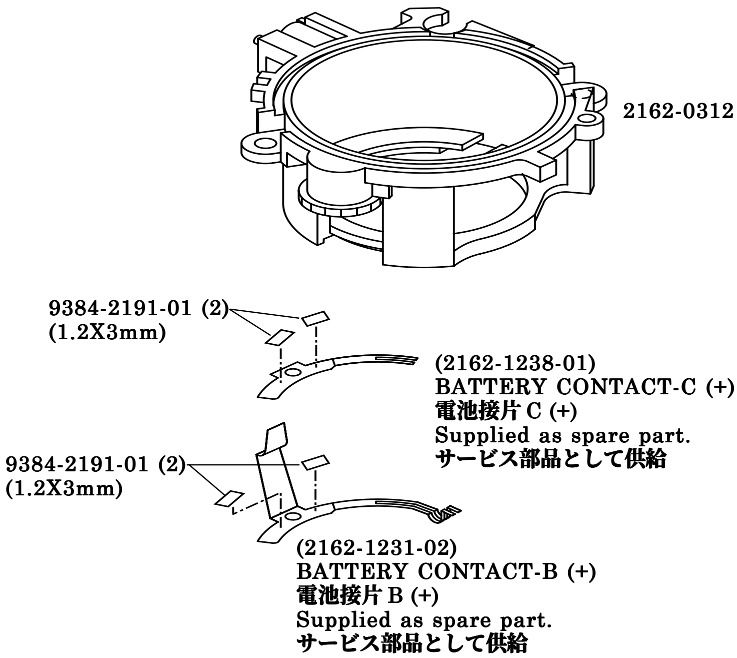
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 06. 2001

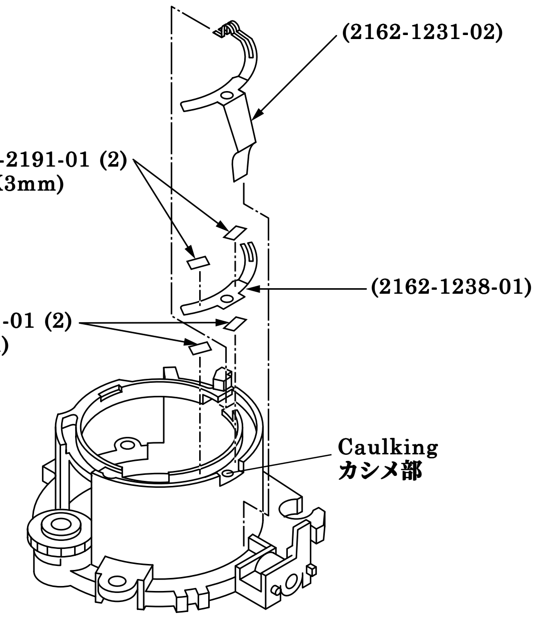
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 6

2162-750

REASON 変更理由	サービス供給 Supplied as spare part.			COMMON MODEL 共通機種	2162-Series
Previous	2162-0312-02	——	——	2162-0312-02	New
Previous	———————	——	——	(2162-1231-02)	New
Previous	———————	——	——	(2162-1238-01)	New
Previous	———————	——	——	9384-2191-01	New





Cut off the caulked part of #0312 to release #1231.
Affix #1238 then #1231 with double-faced tape.
・2162-0312 のカシメ部 (カシメ部のみ、軸は残す)をカッター等でカットし、2162-1231 を取り外す。
・両面テープで 2162-1238 および 2162-1231 を貼り付ける。

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P026

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 15. 2001

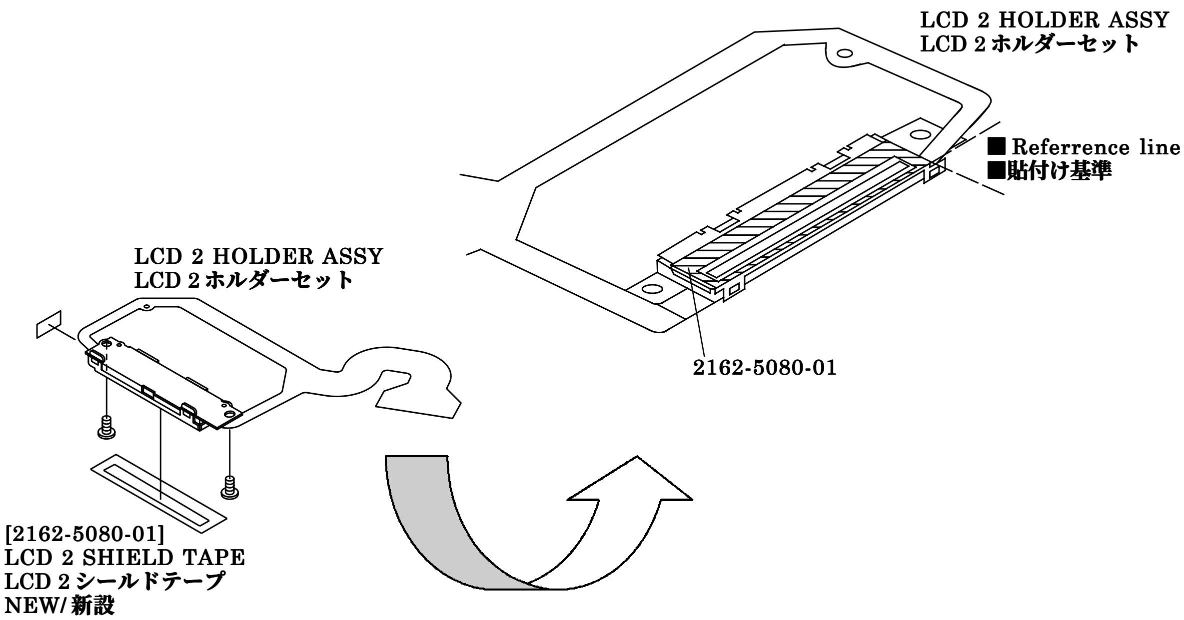
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 7

2162-652

REASON 変更理由	インファインダーからの光漏れ（ゴースト）防止 To prevent light leak of in-finder LCD backlight.	COMMON MODEL 共通機種	2162-Series

Previous	———————	——	——	[2162-5080-01]	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P027

PARTS MODIFICATION LIST

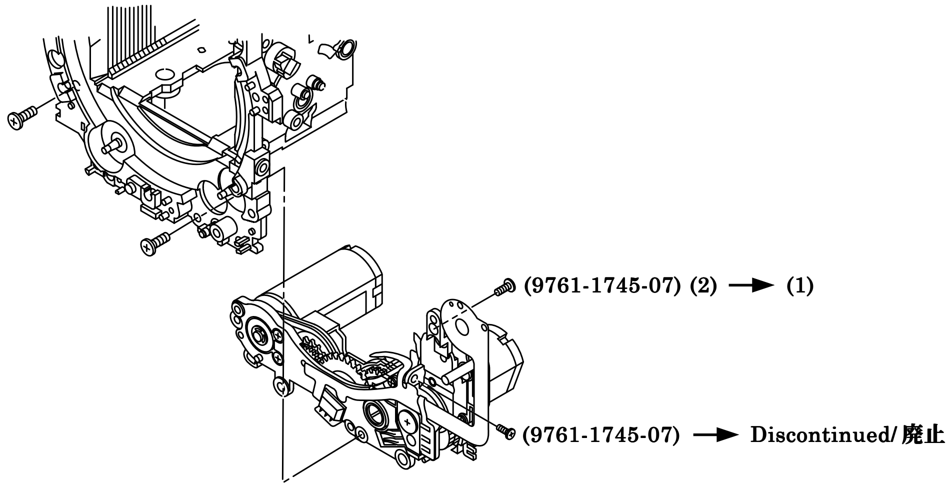
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 29. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 9

2162-755 - 760

REASON 変更理由	コストダウン / To cut cost			COMMON MODEL 共通機種	2162-Series
Previous	9761-1745-07	——	——	———————	New



REF No. 管理No.	QS FA 2162-P028

PARTS MODIFICATION LIST

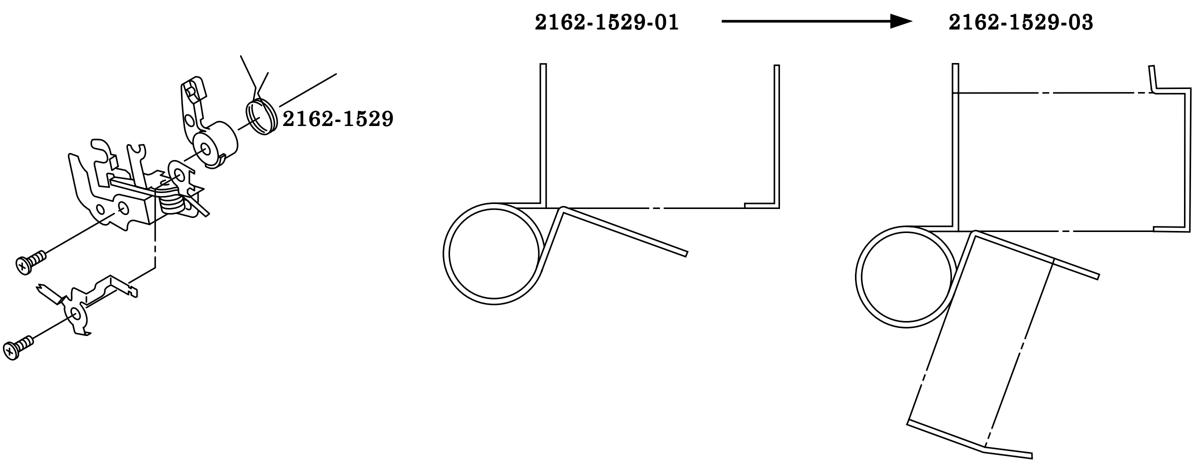
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	March 29. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 8

2162-723

REASON 変更理由	ショート防止 / To prevent short-circuit			COMMON MODEL 共通機種	2162-Series
Previous	2162-1529-01	→○	×←	2162-1529-03	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P029

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	April 19. 2001

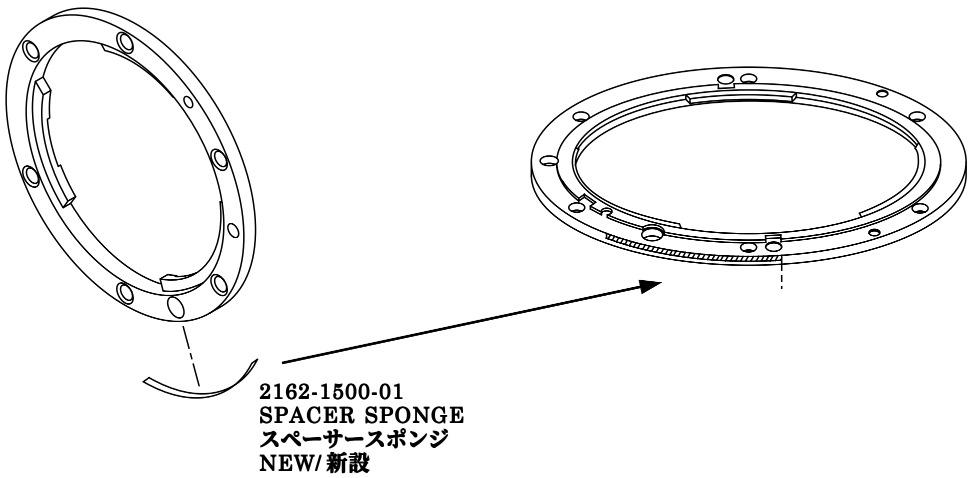
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 8

2162-657

REASON 変更理由	マウントと前カバーの隙間改善 To fill up the gap between the mount and the front cover.	COMMON MODEL 共通機種	2162-Series

Previous	――――――	――	――	2162-1500-01	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P030

PARTS MODIFICATION LIST

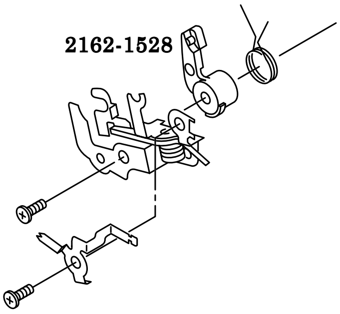
Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	May 22. 2001

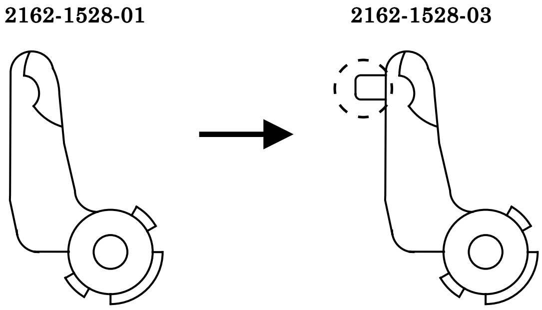
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 8

2162-726

REASON 変更理由	ショート防止 / To prevent short-circuit			COMMON MODEL 共通機種	2162-Series
Previous	2162-1528-01	→○	×←	2162-1528-03	New





REF No. 管理No.	QS FA 2162-P031

PARTS MODIFICATION LIST

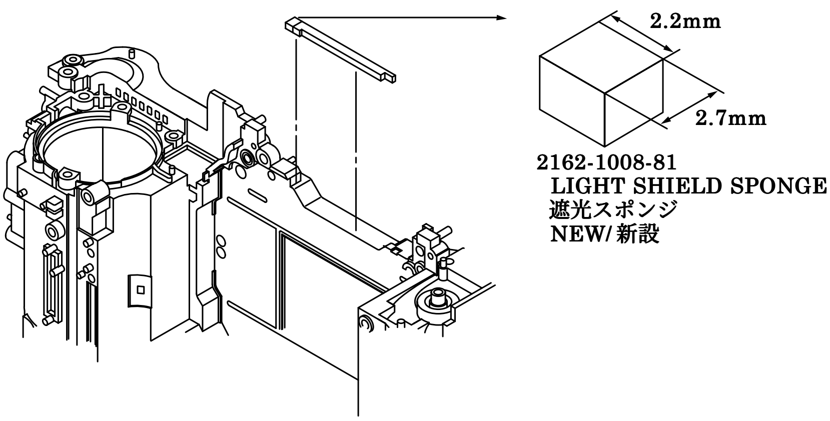
Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	May 22. 2001

Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 6

2162-729

REASON 変更理由	光漏れ防止 / To prevent light leak			COMMON MODEL 共通機種	2162-Series
Previous	――――――	――	――	2162-1008-81	New



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。

According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

REF No. 管理No.	QS FA 2162-P032

PARTS MODIFICATION LIST

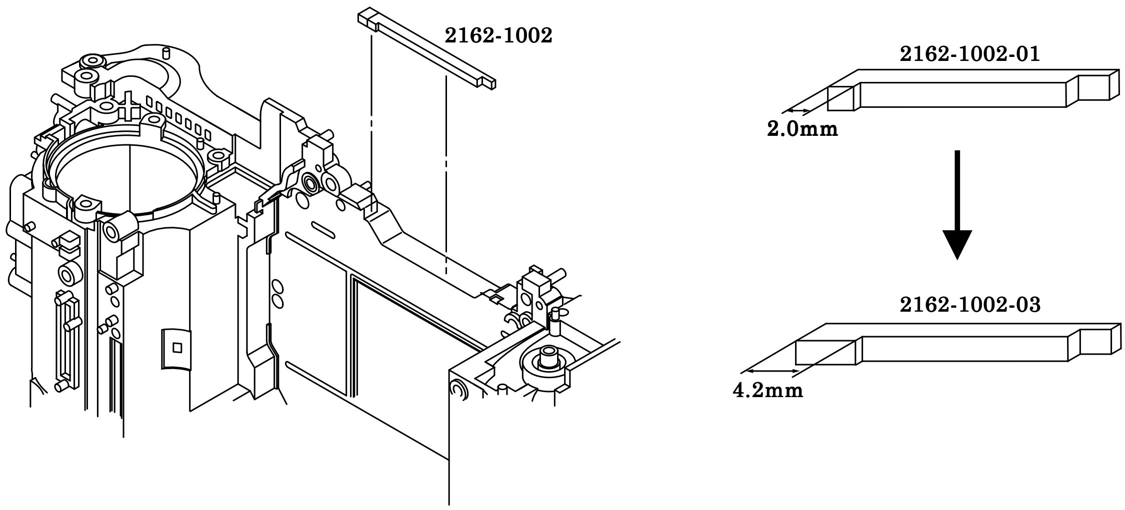
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	May 22. 2001

Approved by 承認	Verified by 審査	Written by 作成

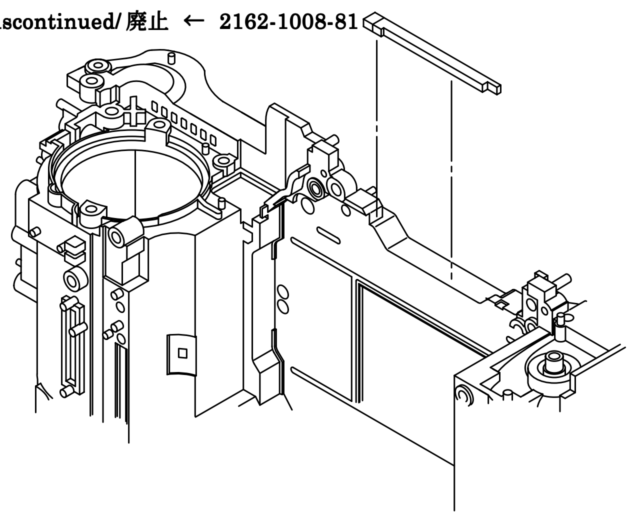
Parts List P. 6

2162-727

REASON 変更理由	生産都合 For efficient production	COMMON MODEL 共通機種	2162-Series		
Previous	2162-1002-01	→×	×←	2162-1002-03	New



~~Previous~~	2162-1008-81	——	——	——————	New



Interchangeability as a set/セットでの互換性	Previous	→○	○←	New

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

PARTS MODIFICATION LIST

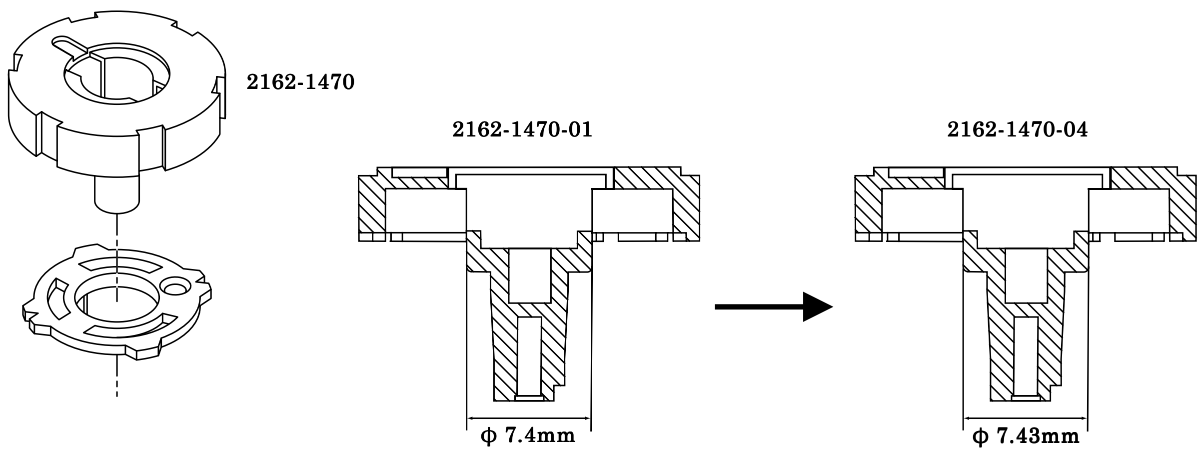
REF No. 管理No.	QS FA 2162-P033
Division 主管部署	Camera Service Div. カメラサービス部
Valid from 施行年月日	May 22. 2001

Approved by 承認	Verified by 審査	Written by 作成

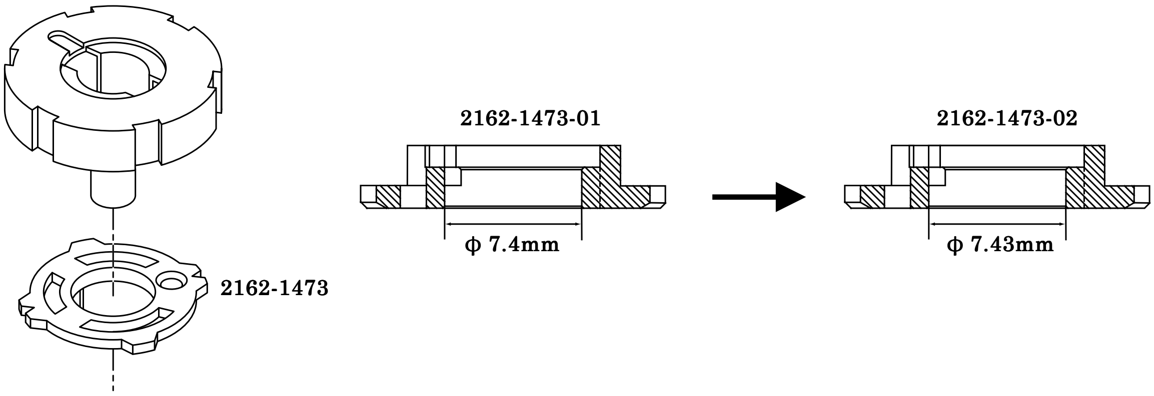
Parts List P. 11

2162-731

REASON 変更理由	生産都合 For efficient production		COMMON MODEL 共通機種	2162-Series	
Previous	2162-1470-01	→×	×←	2162-1470-04	New



Previous	2162-1473-01	→×	×←	2162-1473-02	New



Interchangeability as a set/セットでの互換性	Previous	→○	×←	New

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

REF No. 管理No.	QS FA 2162-P034

PARTS MODIFICATION LIST

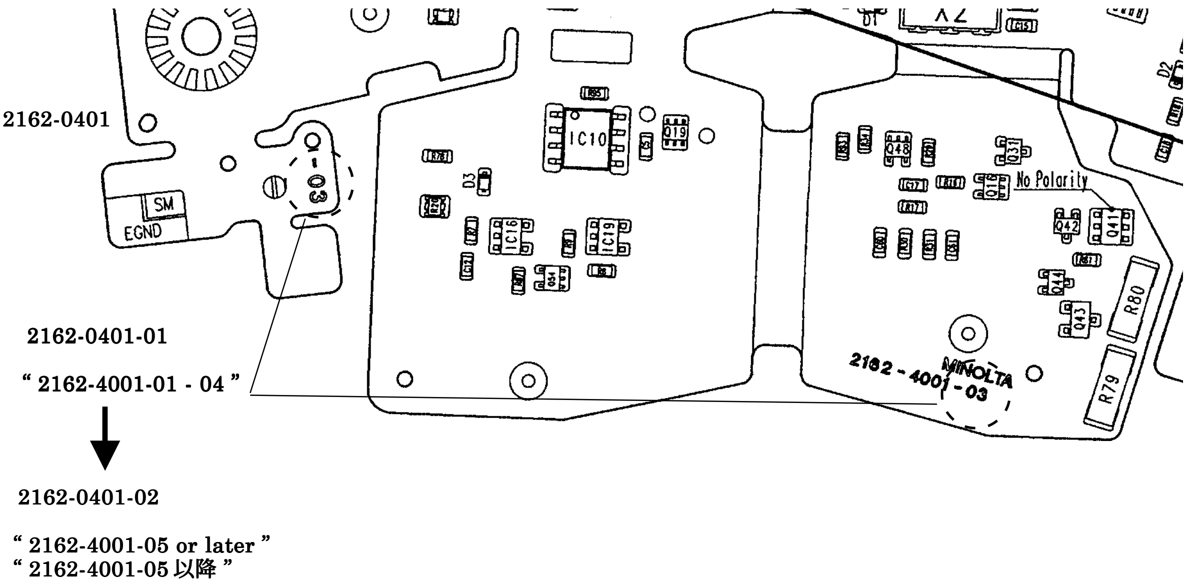
Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	June 07. 2001

Approved by 承認	Verified by 審査	Written by 作成

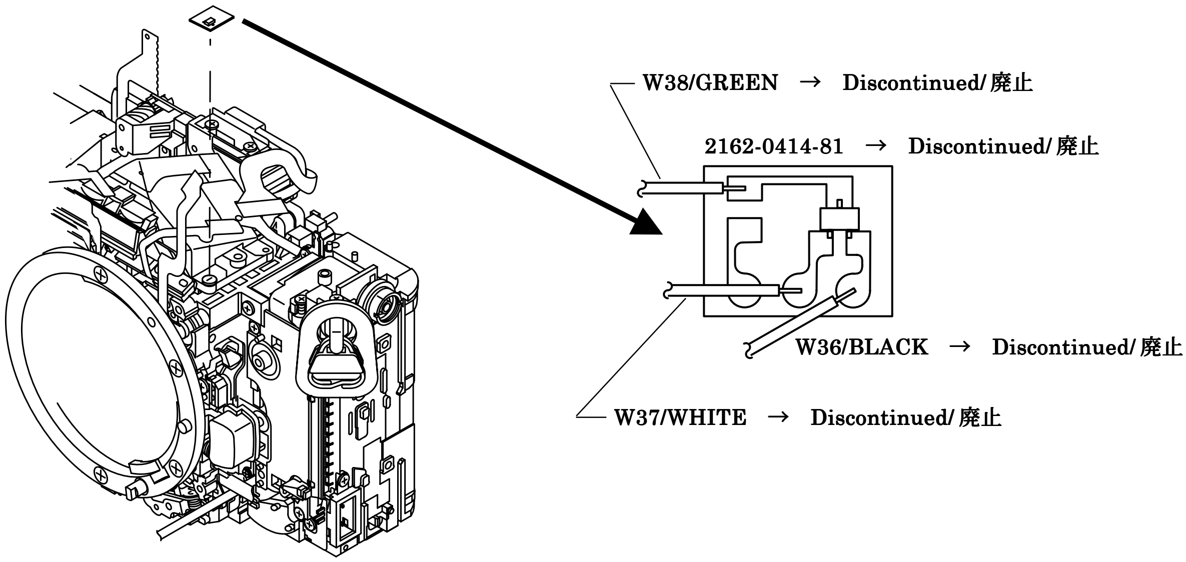
Parts List P. 2

2162-666

REASON 変更理由	生産都合 For efficient production		COMMON MODEL 共通機種	2162-Series	
Previous	2162-0401-01	→×	×←	2162-0401-02	New



Previous	2162-0414-81	——	——	————	New
Previous	(9394-0807-00):W36	——	——	————	New
Previous	(9394-0807-09):W37	——	——	————	New
Previous	(9394-0807-05):W38	——	——	————	New



Interchangeability as a set/セットでの互換性	Previous	→○	×←	New

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

REF No. 管理No.	QS FA 2162-P035

PARTS MODIFICATION LIST

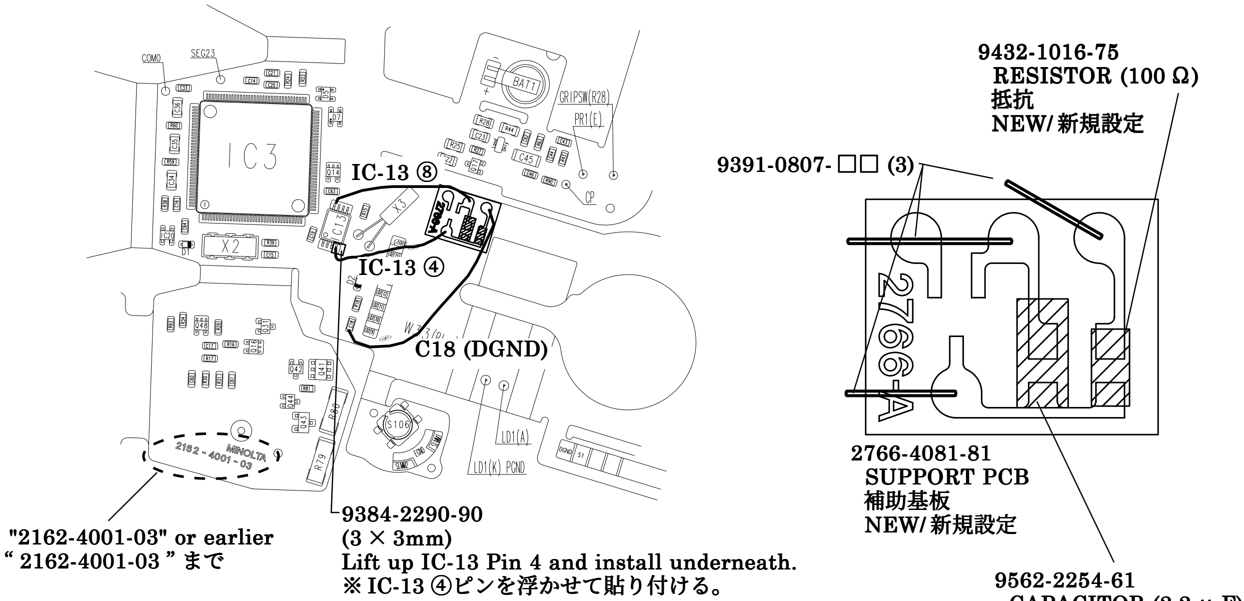
Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	June 14. 2001

Approved by 承認	Verified by 審査	Written by 作成

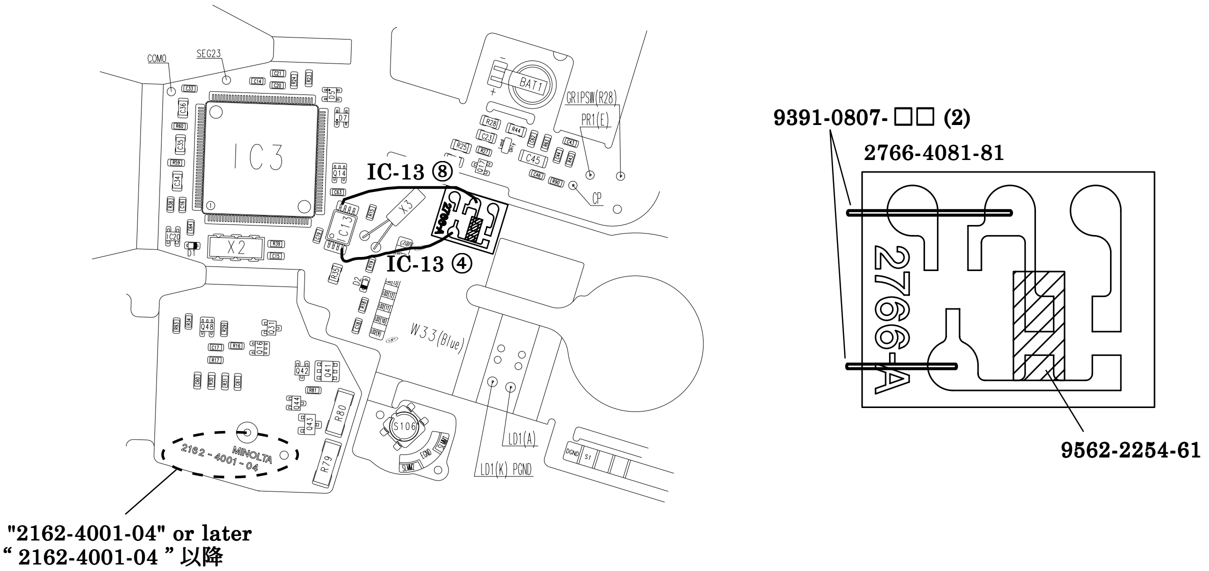
Parts List P. 2 SUPPLEMENTARY INFORMATION QS FA 2162-S07J/E 仮-759

REASON 変更理由	静電気によるデート表示の変化防止 To correct undesirable change in date/time			COMMON MODEL 共通機種	2162-Series
Previous	————	——	——	2766-4081-81	New
Previous	————	——	——	9432-1016-75	New
Previous	————	——	——	9562-2254-61	New
Previous	————	——	——	9384-2290-90	New
Previous	————	——	——	9391-0807-□□	New

■ **For FPC-A of Type-03 or earlier**
■ **A フレキが " 2162-4001-03 " までの場合**



■ **For FPC-A of Type-04 or later**
■ **A フレキが " 2162-4001-04 " 以降の場合**



■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

REF No. 管理No.	QS FA 2162-P036

PARTS MODIFICATION LIST

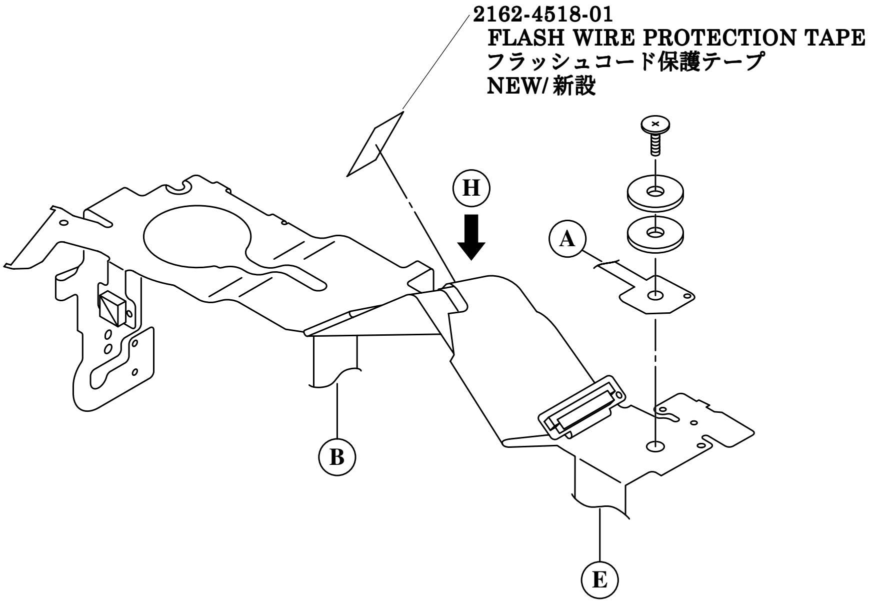
Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	July 24. 2001

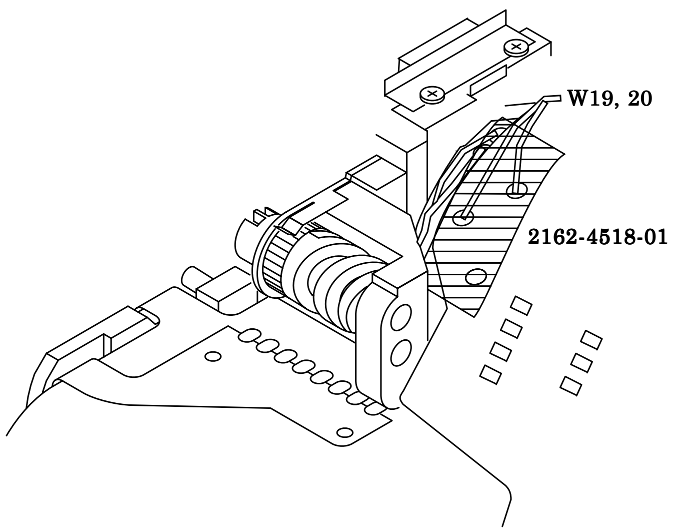
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

2162-766

REASON 変更理由	フラッシュコードのショート防止 / To protect the flash wire			COMMON MODEL 共通機種	2162-Series
Previous	——————	——	——	2162-4518-01	New





PML

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REF No. 管理No.	QS FA 2162-P037

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	August 30. 2001

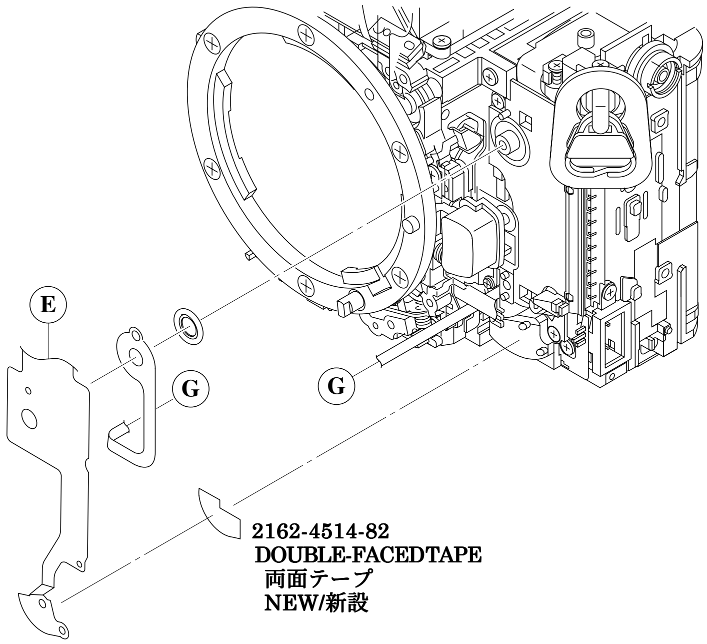
Approved by 承認	Verified by 審査	Written by 作成

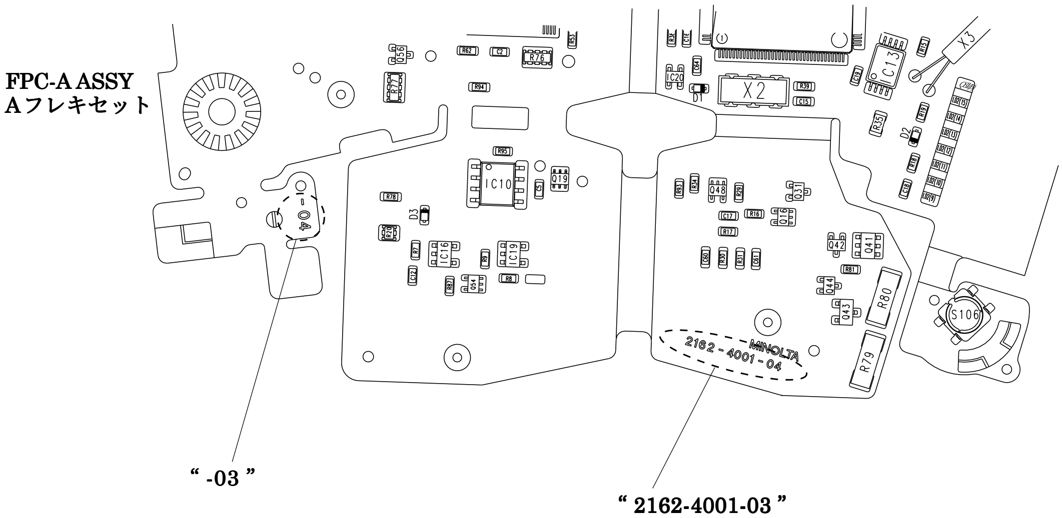
Parts List P. 2

2162-721

REASON 変更理由	AFモードSW接触率の改善 To improve AF mode switch contact.	COMMON MODEL 共通機種	2162-Series

Previous	ーーーーーー	ーー	ーー	2162-4514-82	New





・2162-4514-82はAフレキの印字が"2162-4001-03"にのみ使用すること。
#2162-4514-82 is only compatible with type-03 of FPC-A ("2162-4001-03" printed).

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PML

REF No. 管理No.	QS FA 2162-P038

PARTS MODIFICATION LIST

Division 主管部署	Camera Service Division カメラサービス部
Valid from 施行年月日	February 28. 2002

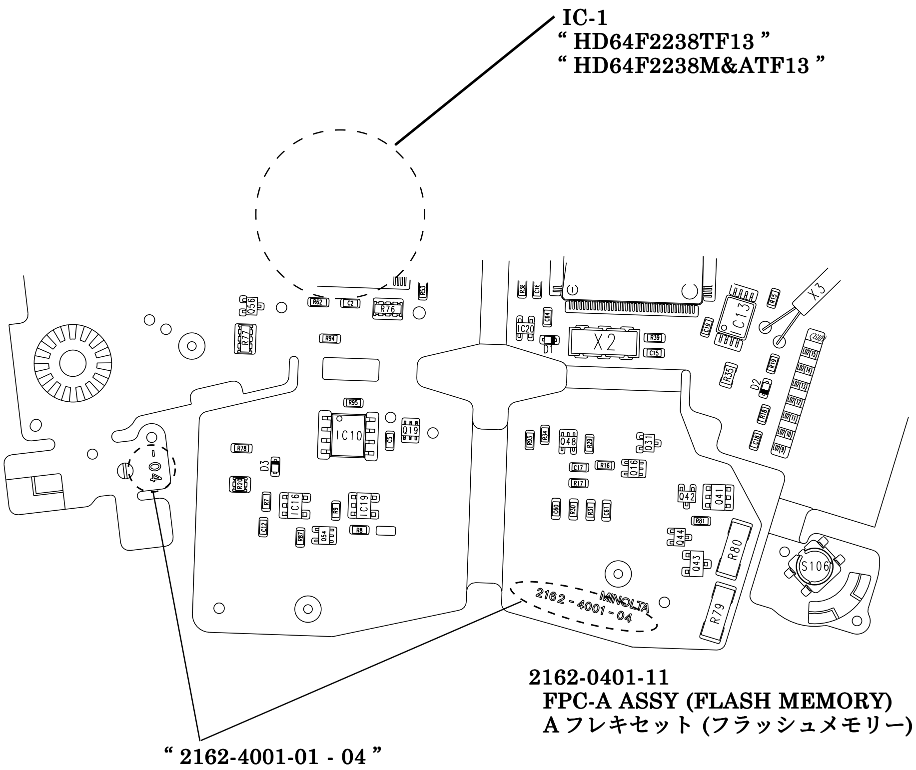
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2

仮-782

REASON 変更理由	管理都合 For efficient part management	COMMON MODEL 共通機種	2162-291, -490, -600

Previous	――――――	――	――	2162-0401-11	New



#2162-0401-11 is managed for spare parts of the Flex-A Assy (#2162-0401-01) which adopts the Flash Memory ICs.
The Support PCB Assy (#2162-0414-81) is required to #2162-0401-11, thus they are supplied as a set. (Refer to PML #QS FA 2162-023.)
管理都合上、2162-0401-01のフラッシュメモリー版を2162-0401-11として管理する。
但し、補助基板セット(2162-0414-81)が必要な為(QSFA 2162-P023参照)、補助基板セットを同梱する。

PML

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PARTS MODIFICATION LIST

REF No. 管理No.	QS FA 2162-P039
Division 主管部署	Camera CS Division カメラCS部
Valid from 施行年月日	November 28. 2002

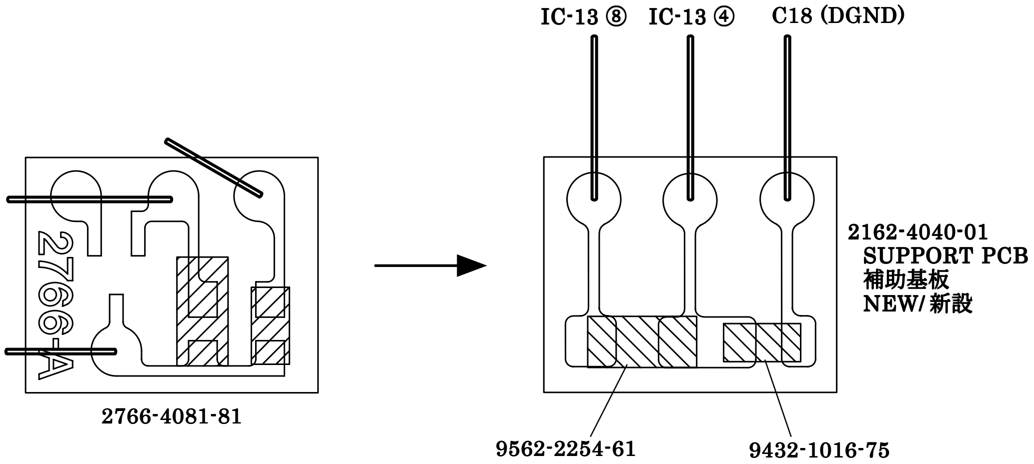
Approved by 承認	Verified by 審査	Written by 作成

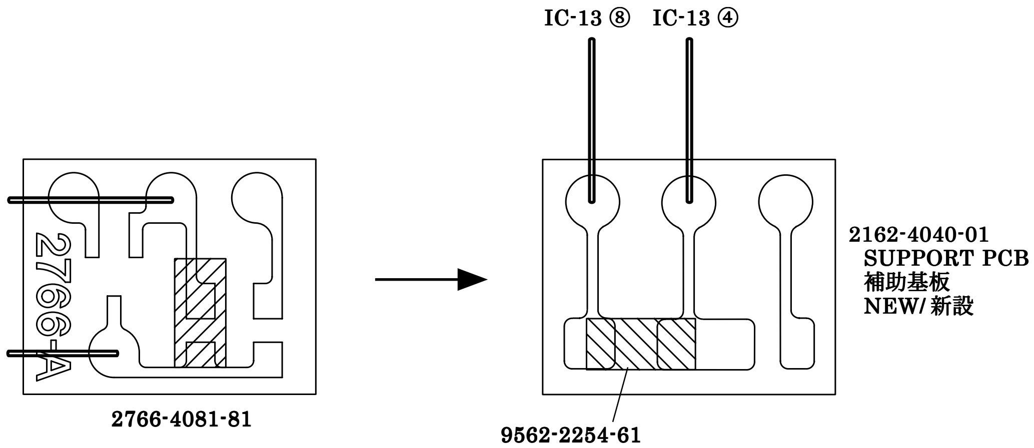
Parts List P. 2

仮-813

REASON 変更理由	手配都合 For efficient part supply	COMMON MODEL 共通機種	2162-Series

Previous	2766-4081-81	→○	○←	2162-4040-01	New





PML

関連情報：PML No. 2162-P035
Related information: Parts Modification List No. 2162-P035.

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct “ Parts List ” in Service Manual for effective parts management.

MINOLTA CO.,LTD.

PARTS MODIFICATION LIST

REF No. 管理No.	QS FA 2162-P040
Division 主管部署	Camera CS Division カメラCS部
Valid from 施行年月日	November 28. 2002

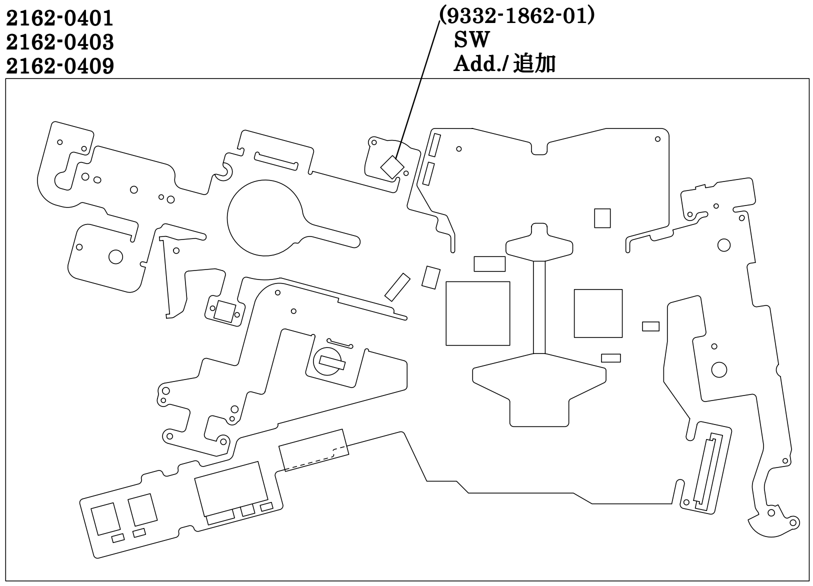
Approved by 承認	Verified by 審査	Written by 作成

Parts List P. 2, 17, 22

仮-841

REASON 変更理由	手配都合 For efficient part supply	COMMON MODEL 共通機種	2162-Series

Previous	――――――	――	――	(9332-1862-01)	New



PML

■本案内状に従い、パーツリストへの転記等、メンテナンスを行なってください。
According to this list, correct " Parts List " in Service Manual for effective parts management.

MINOLTA CO.,LTD.

REPAIR GUIDE

Contents of this manual are in accordance with the assembly procedure. Therefore, follow the reverse procedure when disassembly.
Refer to Wiring diagram on Parts List, page 14 for wiring.

■:Cautions and keypoints
G : Grease
B : Adhesive
T : Tool

CONTENTS

■ Precautions

Chemicals

Handle chemicals of high volatility with care, use of which will affect to your health and environment.

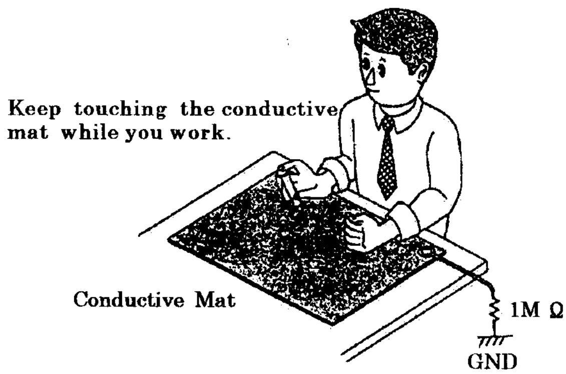
1. Store them sealed in a specific place to prevent exposure to high temperature or direct sunlight.
2. Avoid dividing them into small containers and prevent vaporization.
3. Keep containers sealed when not in use.
4. Avoid using them as much as possible. When required, remove only required amount from the container to make full use.

Plastic parts

1. When cleaning plastic parts, use cleaning paper or cloth. Never use thinner, ketone, ether.
2. When installing plastic parts, insert the specific screws vertically to the parts. (Be careful not to tighten too much.

PCBs

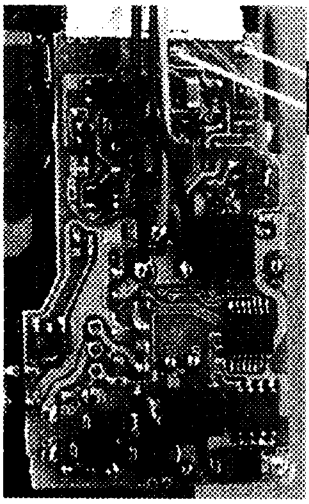
Since PCBs use MOS IC, you must reduce static electricity. When repairing a PCB itself, or when wiring, please perform your work as illustrated below.
If grounding is impossible, connect a cable to a steel desk or shelf.



Discharge

Before disassembly, be sure to discharge the main condenser in the following manner. (Fig. 1)

■ Fig. 1



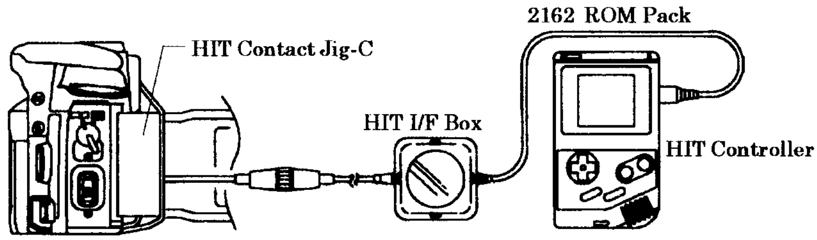
Short-circuit with discharger or resistor of 200-300 ohm/3w.
Check voltage to make sure it is discharged.

To inhibit flash charge

Be sure to make flash charge available after repair.

1. Setup the camera as Fig. 2.
2. Select "ASSIST MODE" from main menu and press SELECT Button.
3. Select "FLASH CHARGE ON/OFF" from assist mode menu and press SELECT Button.
4. Press Shutter-Release Button partway down.
5. Press Button-A or -B to select flash charge on/off. And press SELECT Button.
   Button-A: ON (flash charge available)
   Button-B: OFF (flash charge inhibited)
6. Press Shutter-Release Button partway down. HIT Controller beeps.
7. Re-install Battery.
   Select "MENU" and press SELECT Button to return to the assist mode menu.

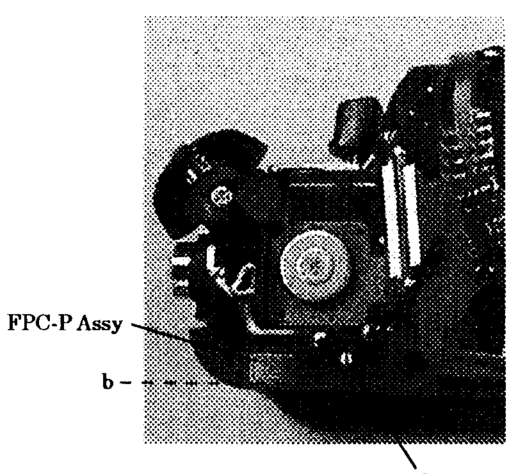
■ Fig. 2



To activate without Top Cover (Fig. 3)

- Short-circuit the pattern –a of FPC-A Assy with solder.
- When using replacement FPC-A, no need to short these patterns because it has pattern-b.
  *Before installing Top Cover, be sure to unsolder the pattern-a or to cut the pattern-b.

■ Fig. 3



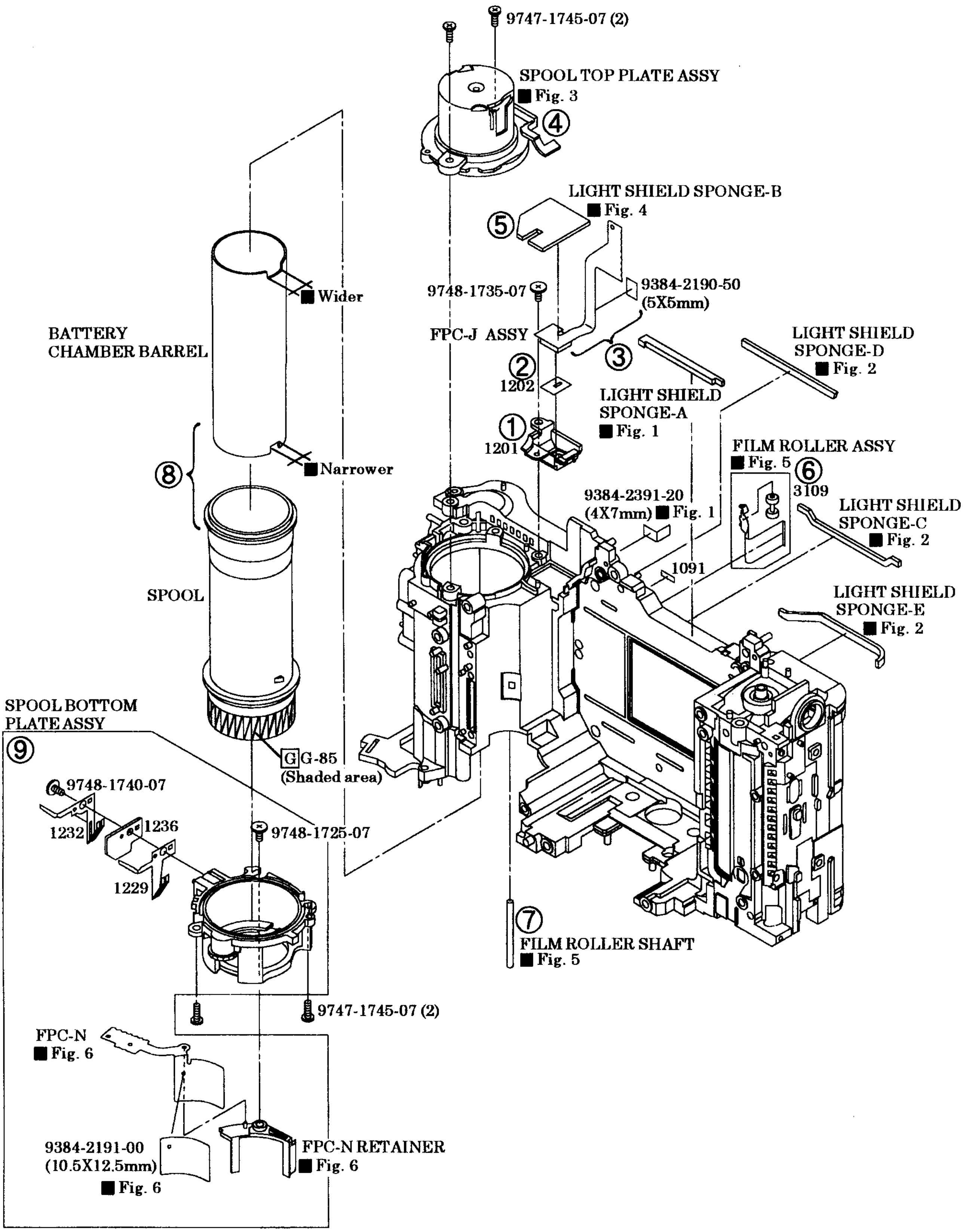
Replacing FPC-A Assy #0408

Initial setting after FPC-A Assy replacement is:

- Flash charge inhibited
- F—shutter lock canceled
- Erratic display in Data Panel.
  *Battery installation after Flash Level Adjustment (pg. 35) will reset these settings.

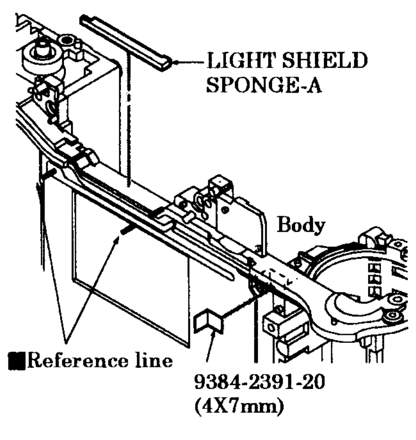
1 SPOOL, SPOOL PLATE ASSY Installation

Install in numerical order; 1 to 9.



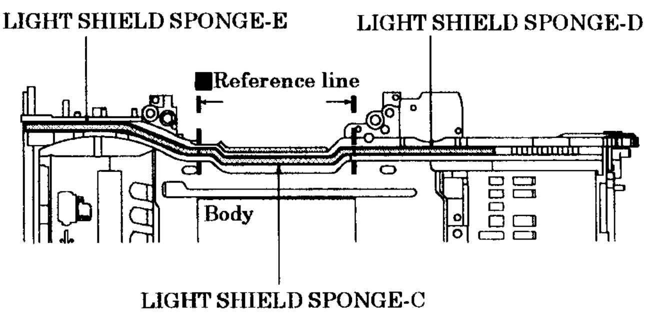
■ Fig. 1

Stick the LIGHT SHIELD SPONGE-A and acetate tape to the designated position.



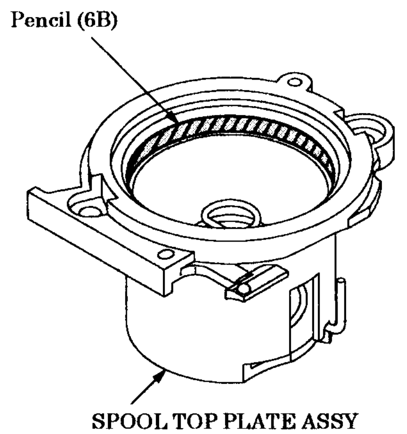
■ Fig. 2

Install LIGHT SHIELD SPONGE-C , -D and -E to the designated position.



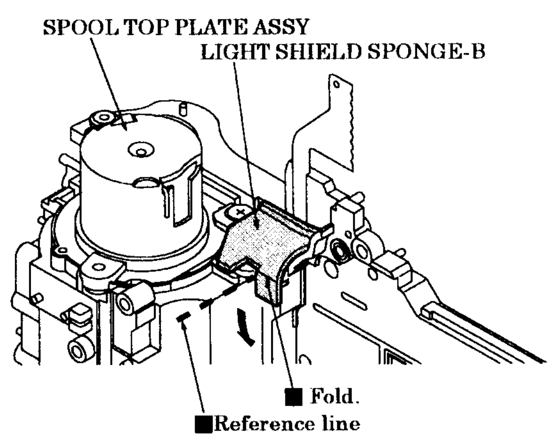
■ Fig. 3

Trace the shaded area with a 6B pencil.
(Apply carbon to the surface.)



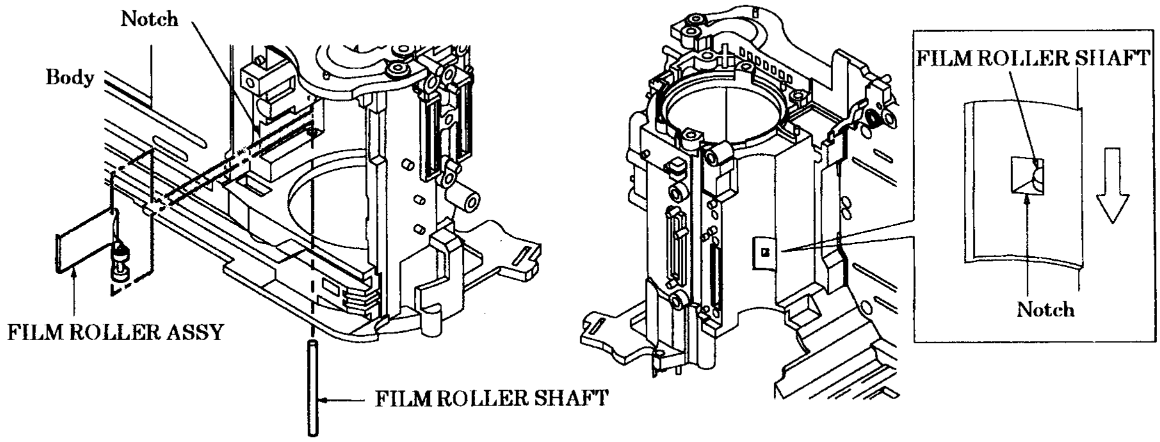
■ Fig. 4

Stick LIGHT SHIELD SPONGE-B to the designated position, and fold it at the designated line.



■ Fig. 5

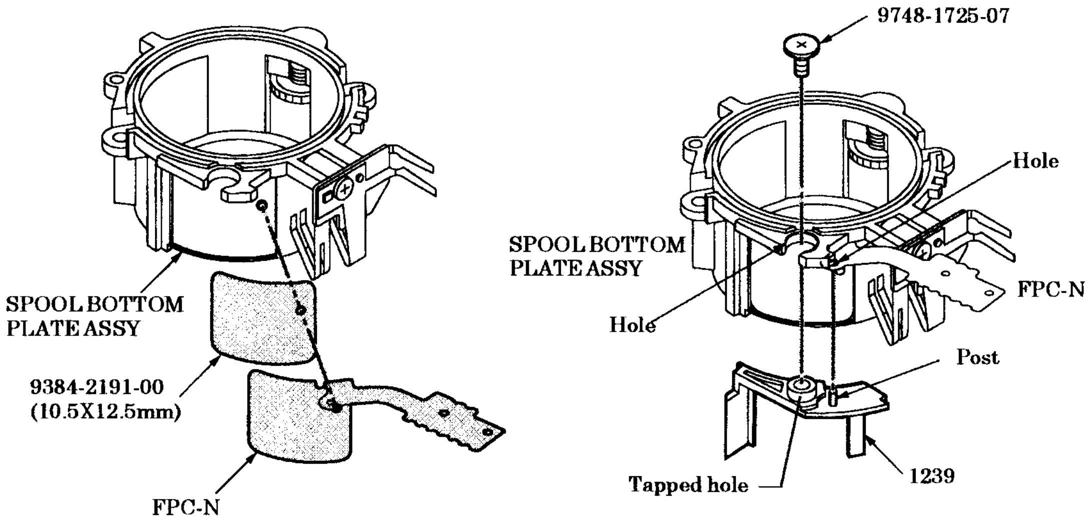
1. Fit FILM ROLLER ASSY to the notch.
2. Insert FILM ROLLER SHAFT to the opening on the body bottom until it stops.
   Thread FILM ROLLER SHAFT between FILM ROLLER ASSY.
   At removal, push out the shaft in the arrow direction.



6 A(2162)

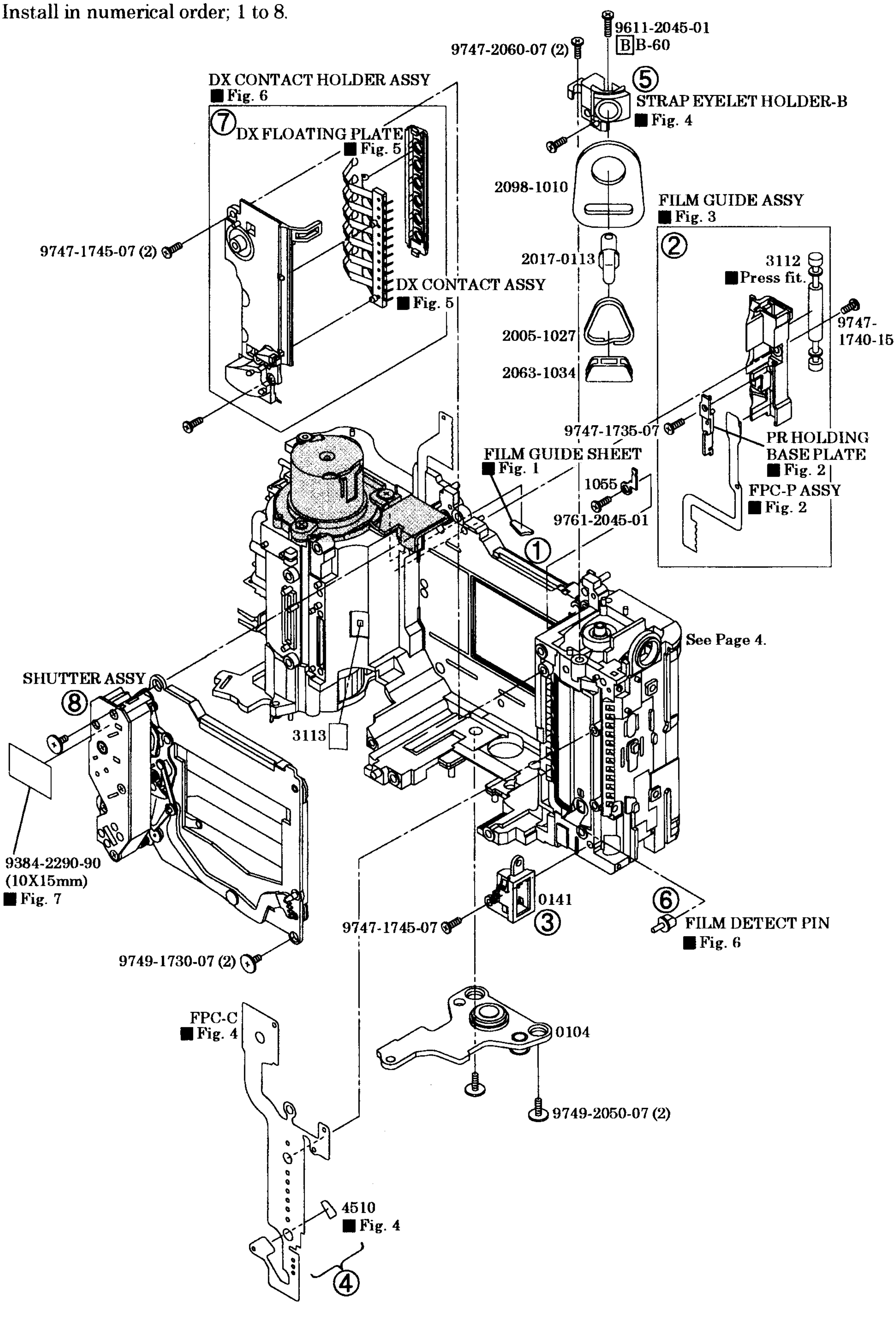
■ Fig. 6

1. Affix FPC-N to the designated position with the double-faced tape.
2. Align the tapped hole of #1239 with the opening of SPOOL BOTTOM PLATE ASSY.
   Fit FPC-N to the post of #1239.



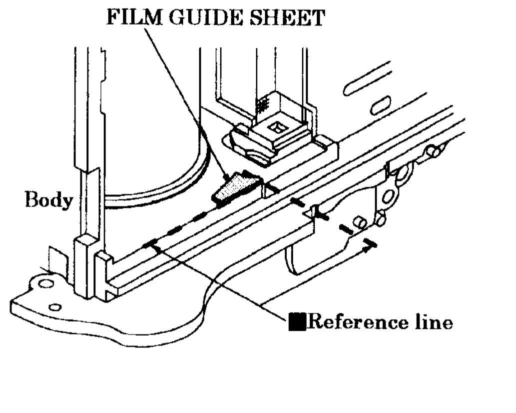
2 SHUTTER ASSY, FPC-C, DX CONTACT HOLDER ASSY Installation

Install in numerical order; 1 to 8.



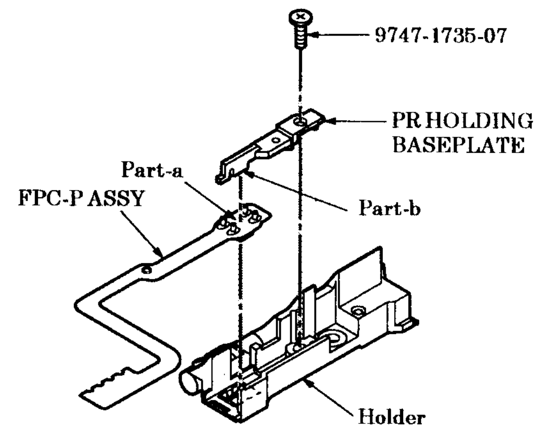
■ Fig. 1

Install FILM GUIDE SHEET to the designated position.



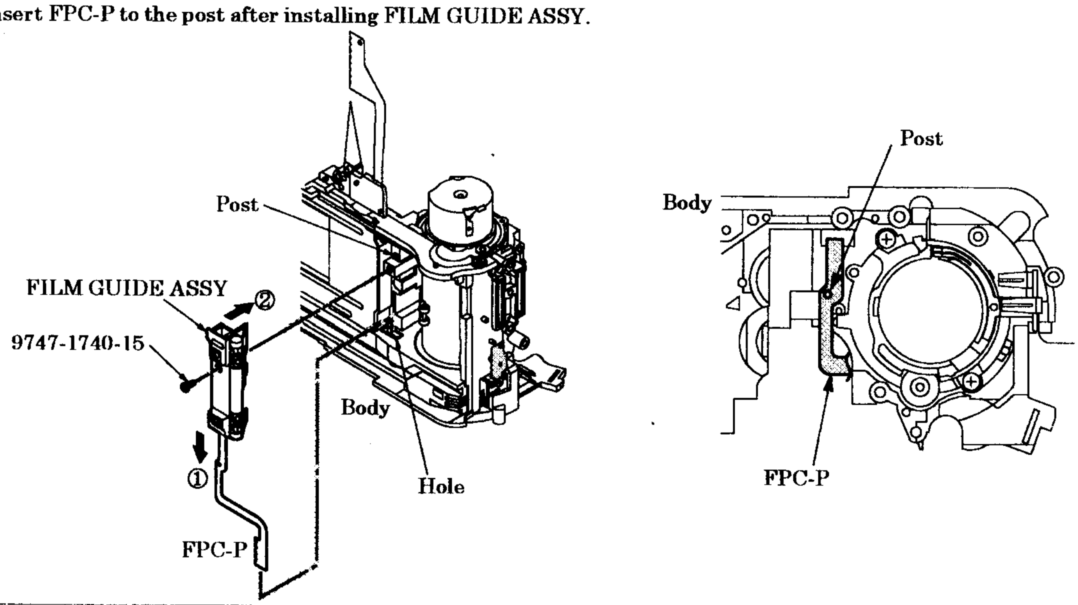
■ Fig. 2

Fit FPC-P ASSY to the holder. Then fit the posts of PR HOLDING BASEPLATE into the holes on the holder, while pushing part-b against part-a.



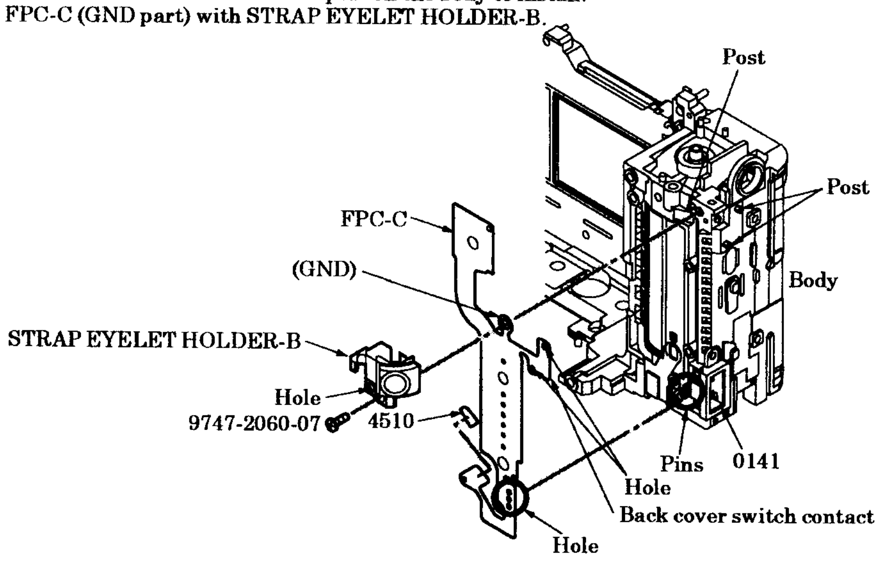
■ Fig. 3

1. Thread FPC-P through the slot. Then install FILM GUIDE ASSY in order of arrow (1) and (2), while fitting the posts to the holes.
2. Insert FPC-P to the post after installing FILM GUIDE ASSY.



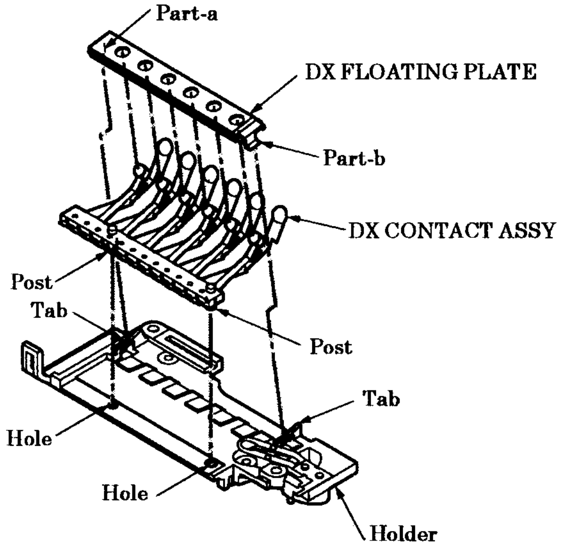
■ Fig. 4

1. Stick #4510 to FPC-C.
2. Fit FPC-C holes to each of #0141 pins, then fit the switch contact part to the post.
3. Fit STRAP EYELET HOLDER to the post on the body to install.
   Affix FPC-C (GND part) with STRAP EYELET HOLDER-B.



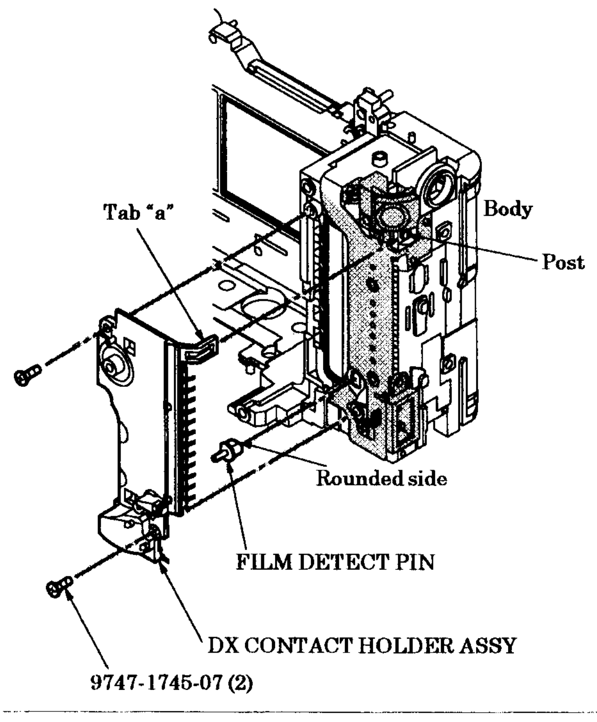
■ Fig. 5

1. Fit the posts of DX CONTACT ASSY to the holes of the holder to install.
2. Thread DX contacts to the holes of DX FLOATING PLATE, then fit part-a and -b of DX FLOATING PLATE to the tabs.



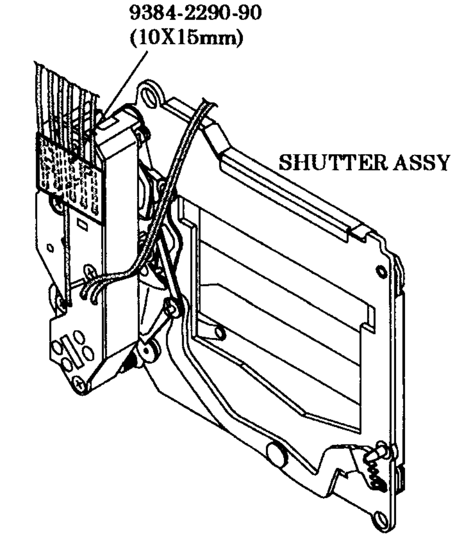
■ Fig. 6

1. Install DX CONTACT HOLDER ASSY so that the rounded side of FILM DETECT PIN comes upward.
2. Hook tab "a" of DX CONTACT HOLDER ASSY to the body.



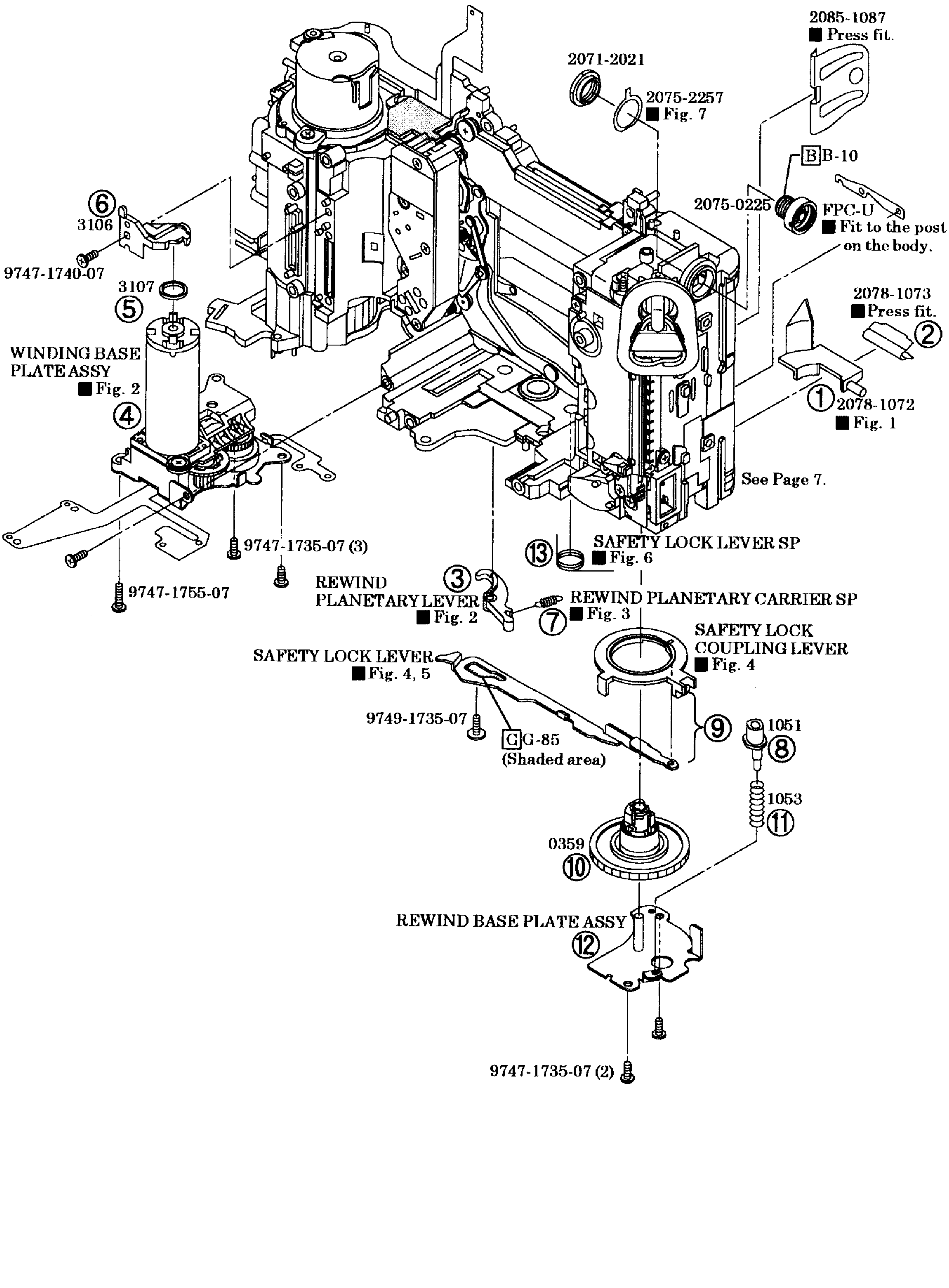
■ Fig. 7

Stick the polyester tape to the designated position.



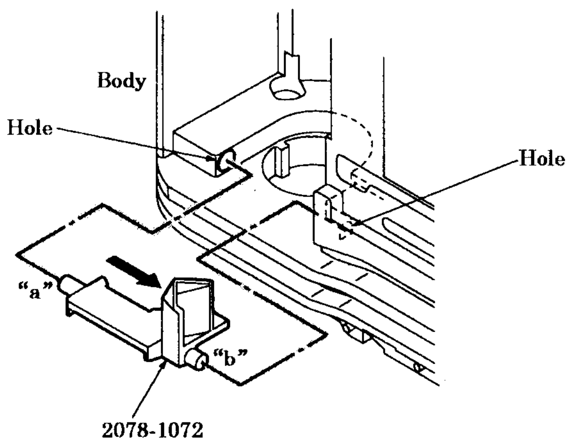
3 WINDING/REWIND BASE PLATE ASSY Installation

Install in numerical order; 1 to 13.



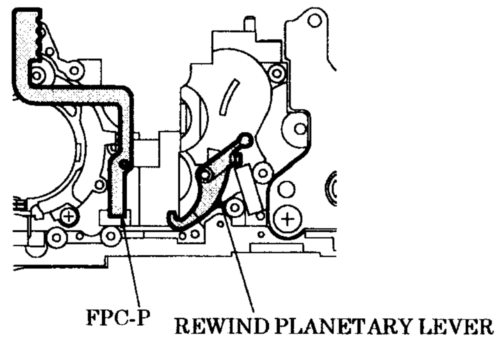
■ **Fig. 1**

Insert shaft-a and -b of 2078-1072 to the holes, and push in the arrow direction until it stops.

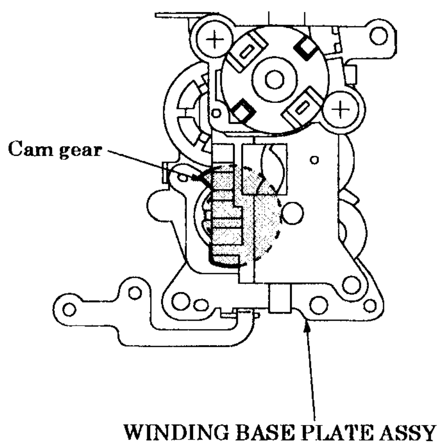


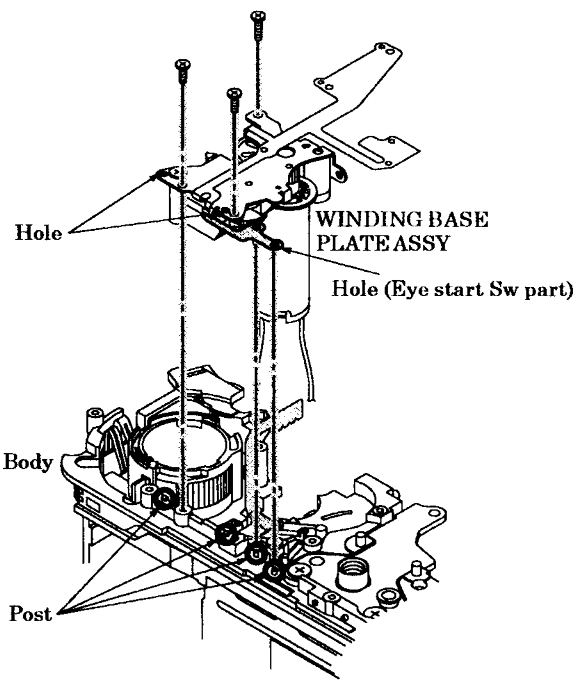
■ **Fig. 2**

1. Install REWIND PLANETARY LEVER as in figure.
2. Arrange FPC-P as in figure.



3. Turn the cam gear of WINDING BASE PLATE ASSY to the position as in figure.

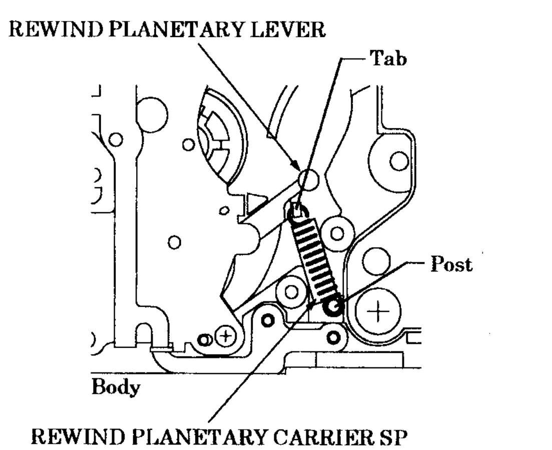




4. Fit WINDING BASE PLATE ASSY to the posts on the body to install.
5. After installing WINDING BASE PLATE ASSY, fit the flex (Eye start Sw part) to post of the body.

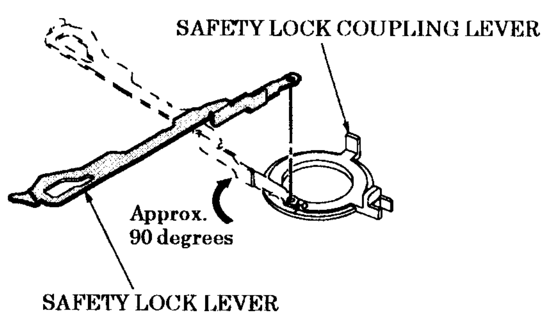
■ **Fig. 3**

Hook REWIND PLANETARY CARRIER SP as in figure.



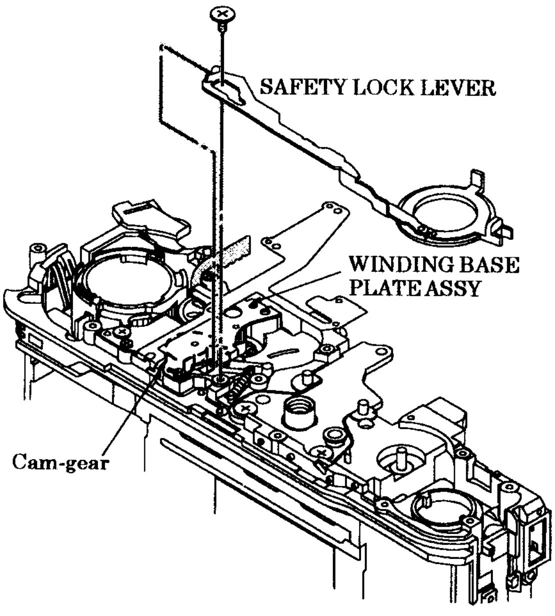
■ **Fig. 4**

1. Fit tip of SAFETY LOCK LEVER to the post on SAFETY LOCK COUPLING LEVER from the designated position.
2. Turn SAFETY LOCK LEVER by 90 degrees so that the lever tip is retained under the tab.



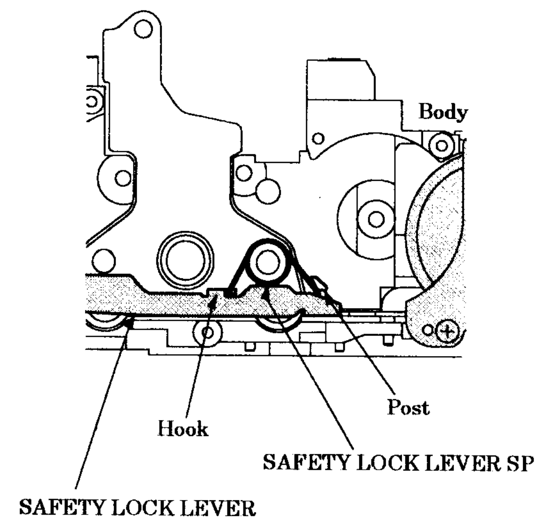
■ Fig. 5

Install SAFETY LOCK LEVER so that its tip goes along the cam-gear in WINDING BASE PLATE ASSY.



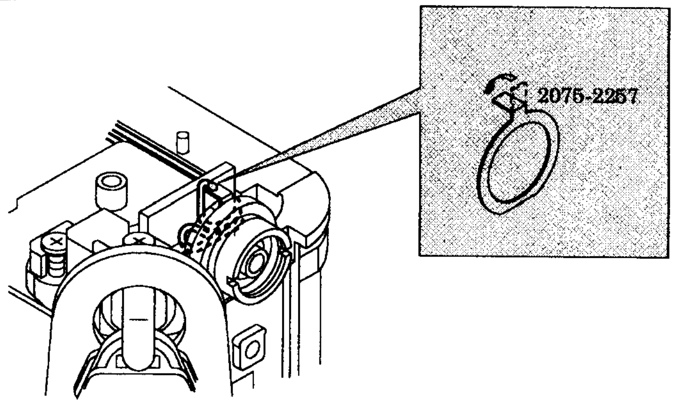
■ Fig. 6

Hook SAFETY LOCK LEVER SP as in figure.



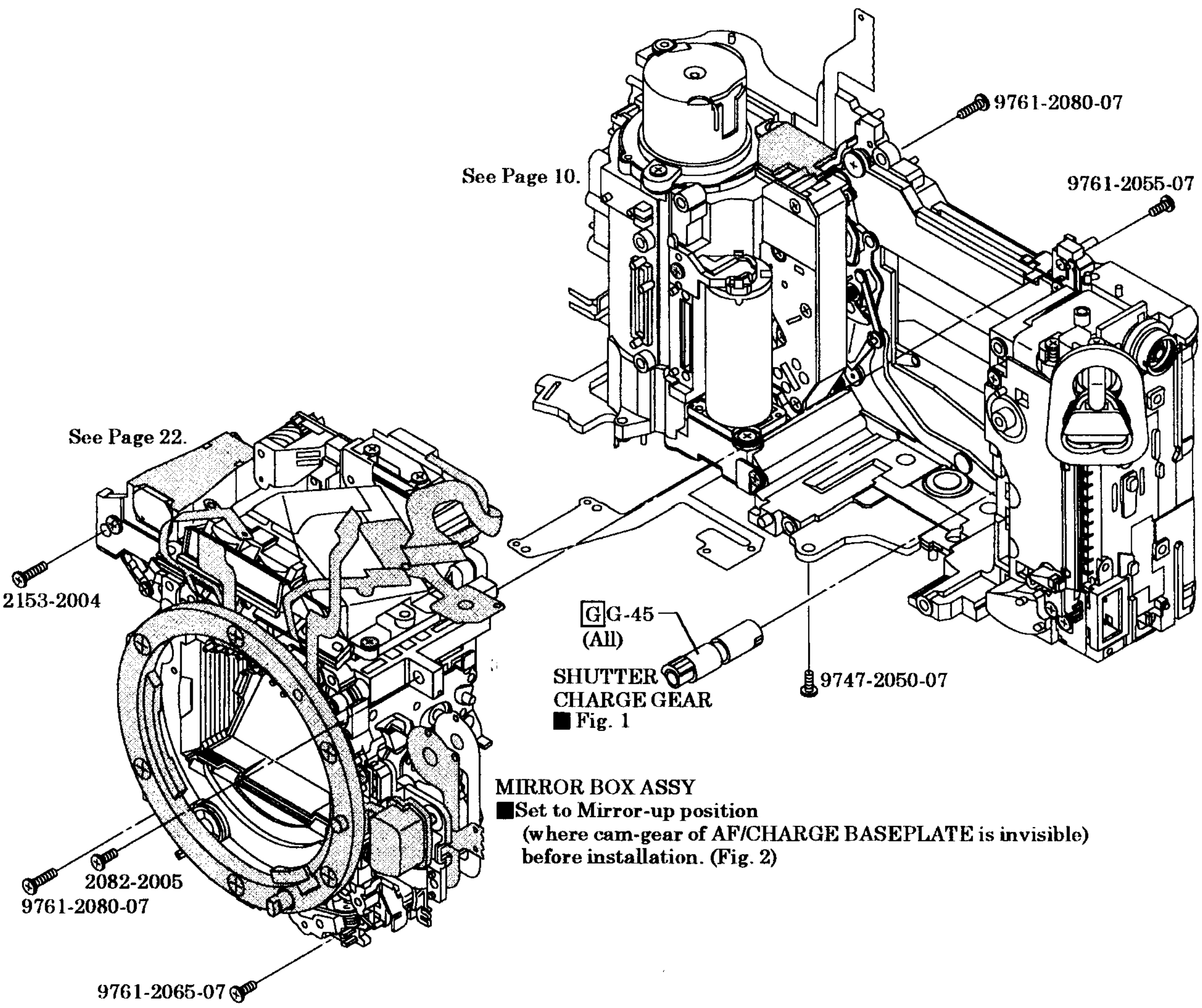
■ Fig. 7

Fold #2075-2257 tab as in figure, and install it so that tab comes to the designated position.



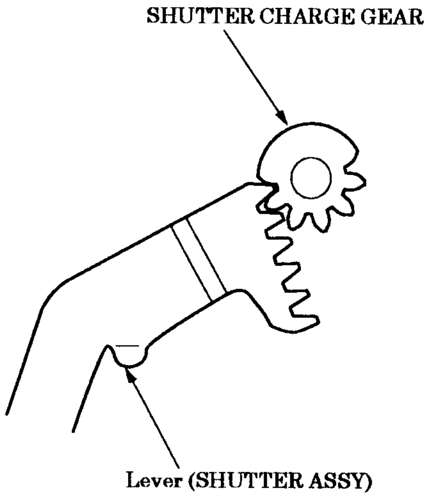
4 MIRROR BOX ASSY Installation

Arrange the flex of MIRROR BOX ASSY and lead wires referring to Fig. 3.



■Fig. 1

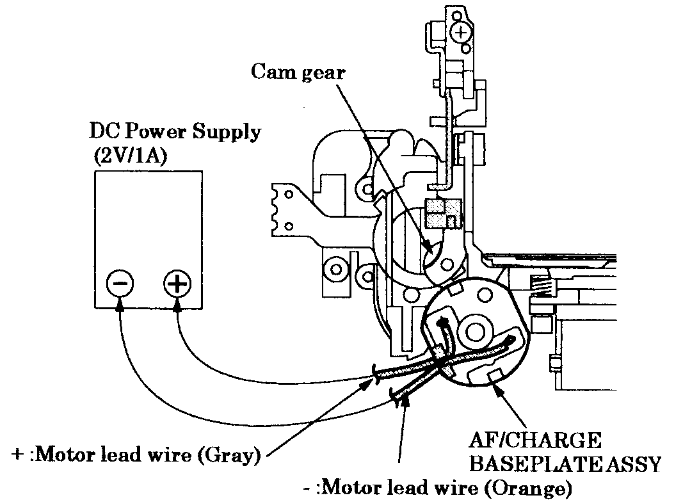
Align SHUTTER CHARGE GEAR with the lever of SHUTTER ASSY at the designated position.



■Fig. 2

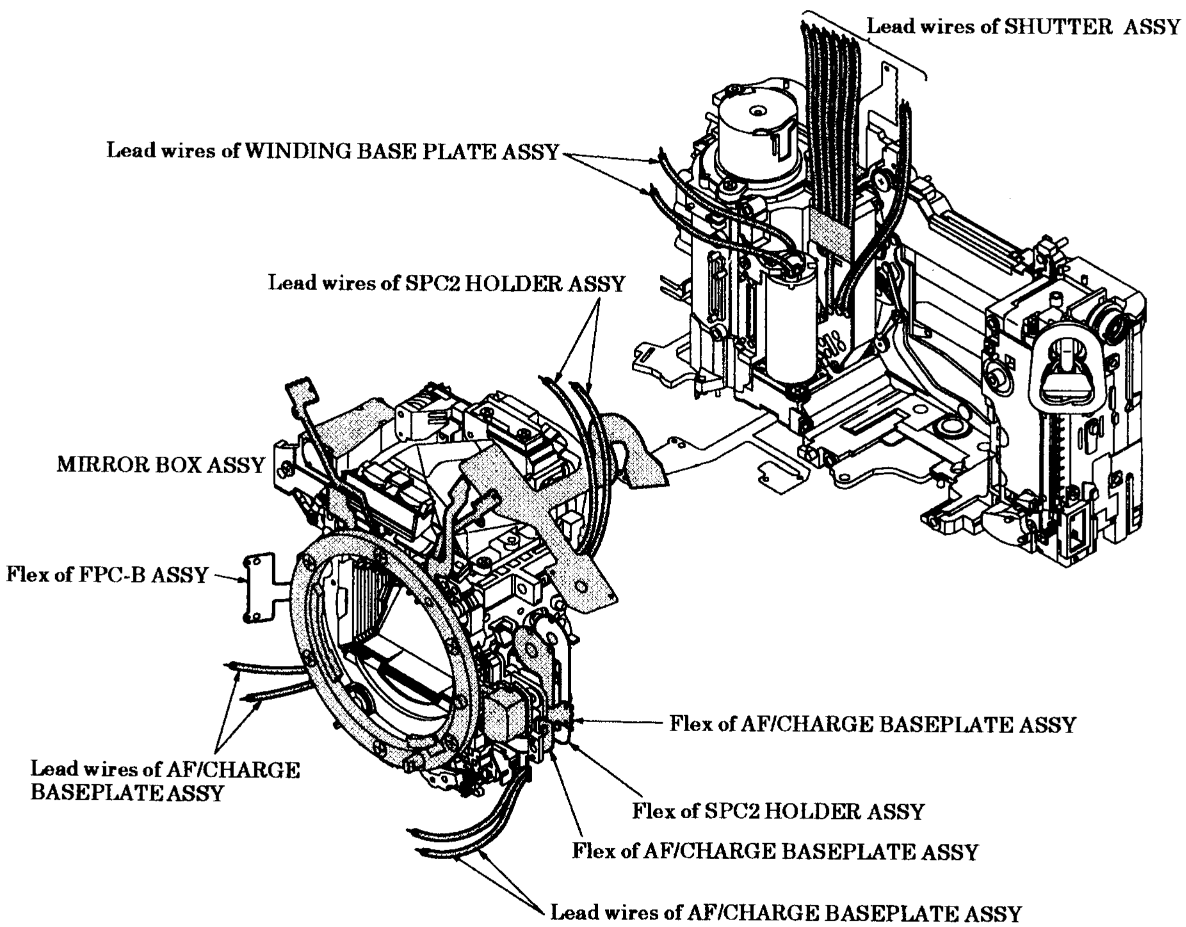
■Mirror-up Setting

Supply power to the charge motor at 2V/1A to drive it normally until the mirror raises completely.



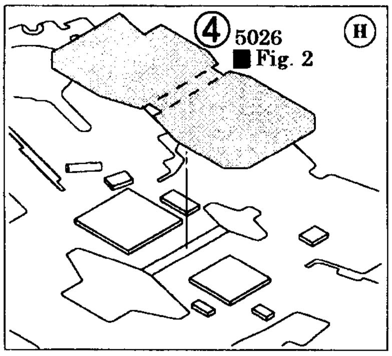
■Fig. 3

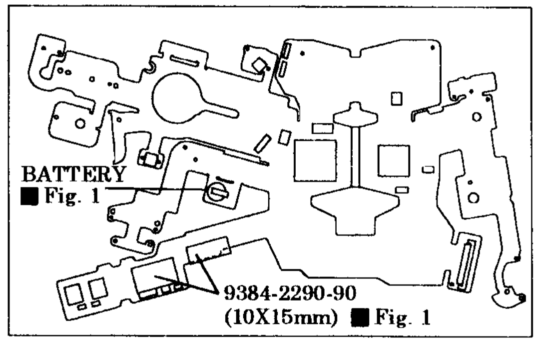
Arrange the flex of MIRROR BOX ASSY and lead wires as in figure.

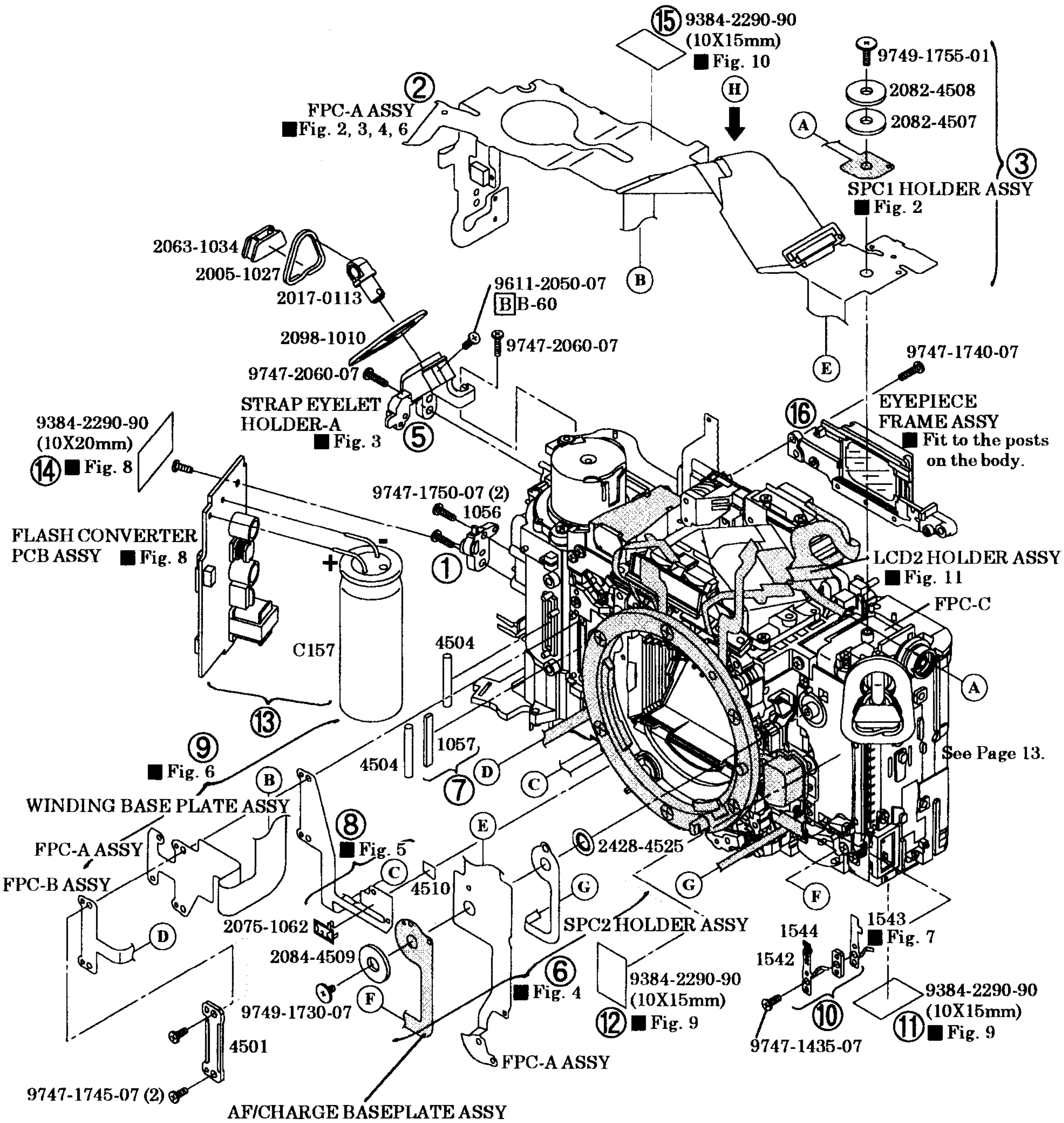


5 FPC-A ASSY, FLASH CONVERTER PCB ASSY Installation

Install in numerical order; 1 to 16.
After installation, arrange lead wires referring to pg. 18.



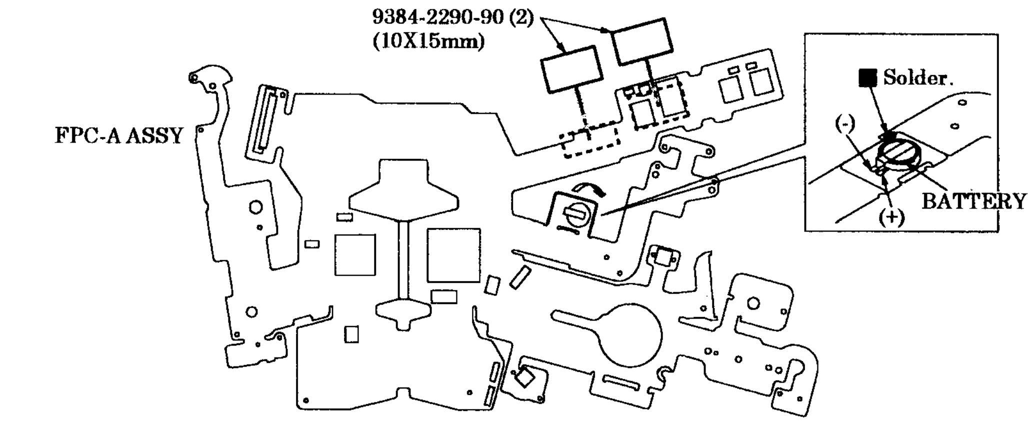




REPAIR GUIDE

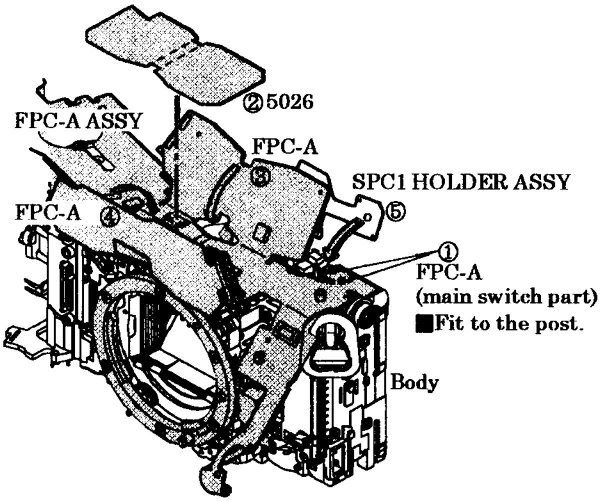
■ Fig. 1

1. Stick the polyester tape to the designated position.
2. Confirm the polarity and solder the battery.
3. Fold back the battery part of FPC-A and solder.



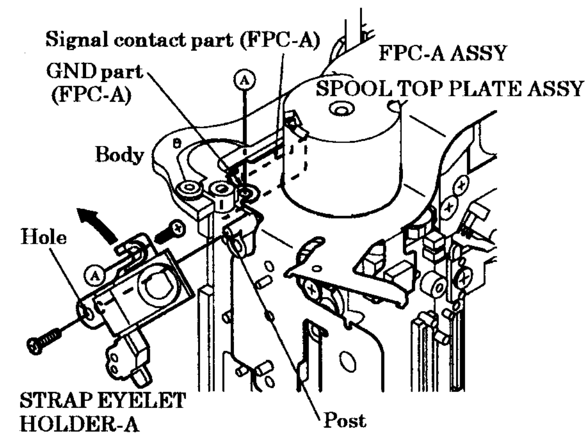
■ Fig. 2

1. Fit the main switch part of FPC-A to the post.
2. Stick #5026 onto FPC-A.
3. Fold back the rear part of FPC-A.
4. Fold back the front part of FPC-A.
5. Put on the flex of SPC1 HOLDER ASSY.



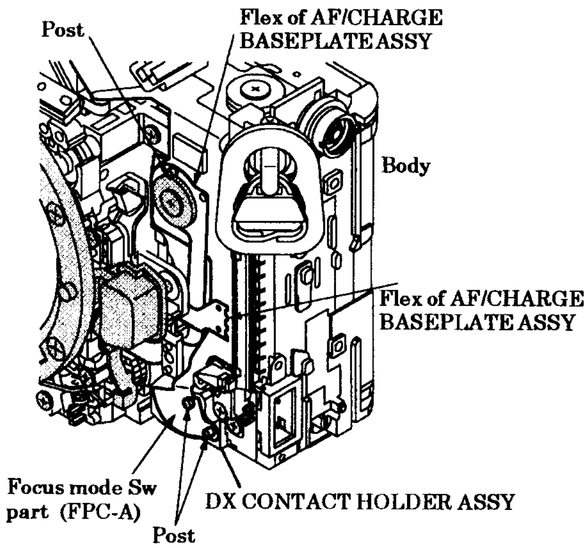
■ Fig. 3

1. Insert the signal contact part of FPC-A between the body and SPOOL TOP PLATE ASSY.
2. Hold STRAP EYELET HOLDER-A inclined as in figure and fit its hole to the post on the body.
3. Turn STRAP EYELET HOLDER-A in the arrow direction so that GND part of FPC-A is held underneath.



■ Fig. 4

1. Pile up the flexes fitting to the post as illustrated.
2. Fit Focus mode Sw part of FPC-A to the posts of DX CONTACT HOLDER ASSY.



■ Fig. 5

1. Install #4510 to the designated position.
2. Fit the flex of WINDING BASE PLATE ASSY to the posts of mirror box.
3. Solder #2075-1062.

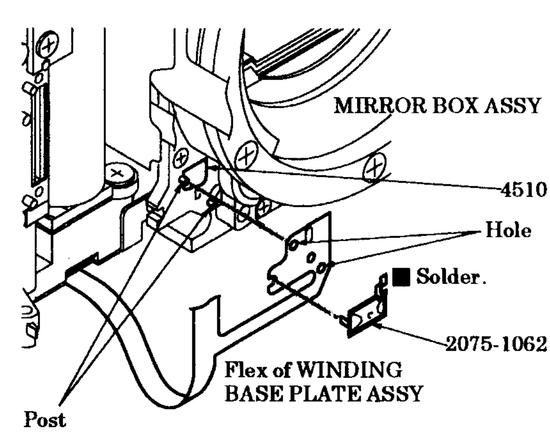


Fig. 6

Fit the flexes to the post on the body as illustrated.

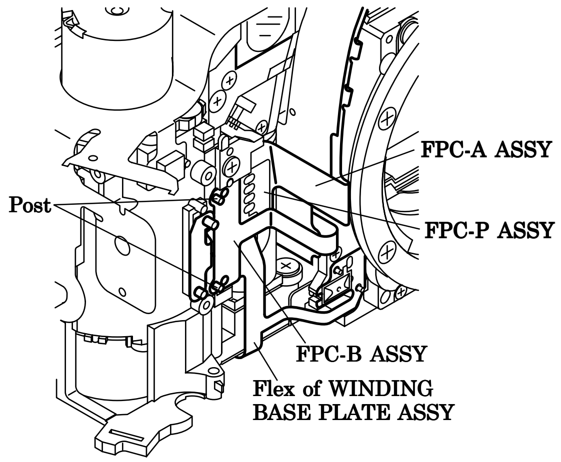


Fig. 7

Hook tab-a of #1543 to the slot of AF/CHARGE BASE-PLATE ASSY.

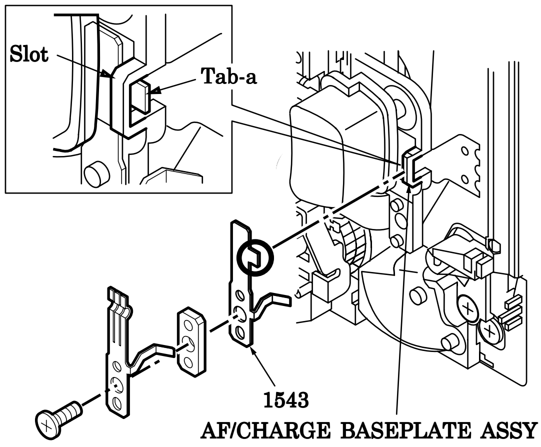


Fig. 8

1. Insert tab-a of FLASH CONVERTER PCB ASSY to the slot of the body.
2. Solder FLASH CONVERTER PCB ASSY, FPC-A and BATTERY CONTACT-B and -G.
3. Install the polyester tape to the dashed line part.

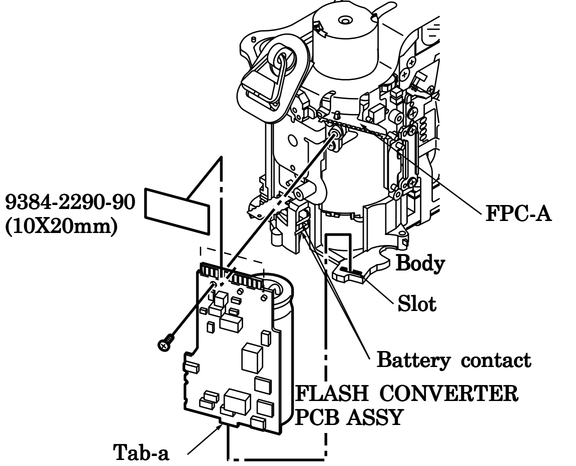


Fig. 9

Stick the polyester tape to the designated position.

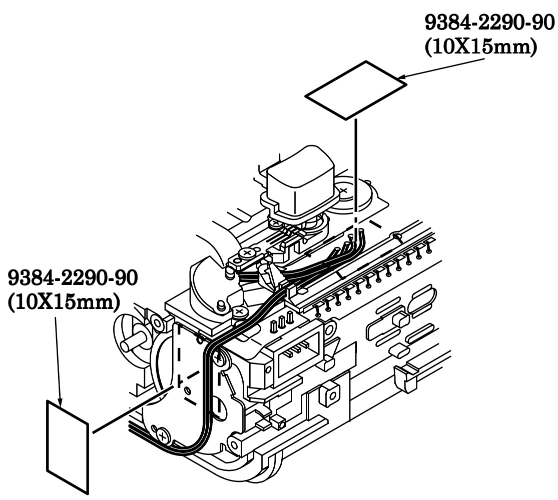


Fig. 10

Solder FPC-P ASSY, then stick the polyester tape to the designated position.

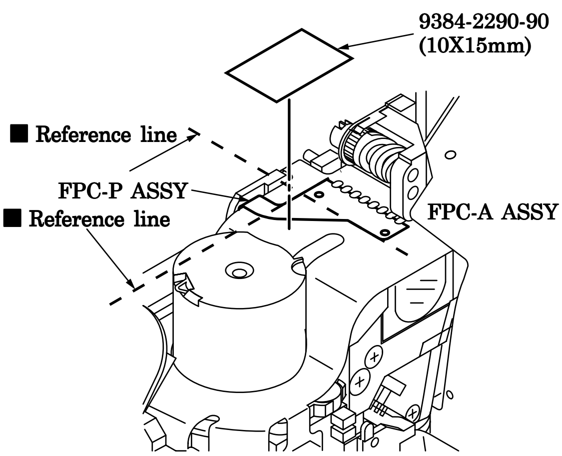
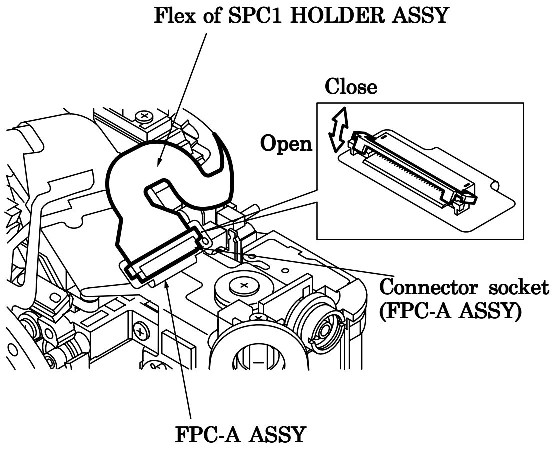
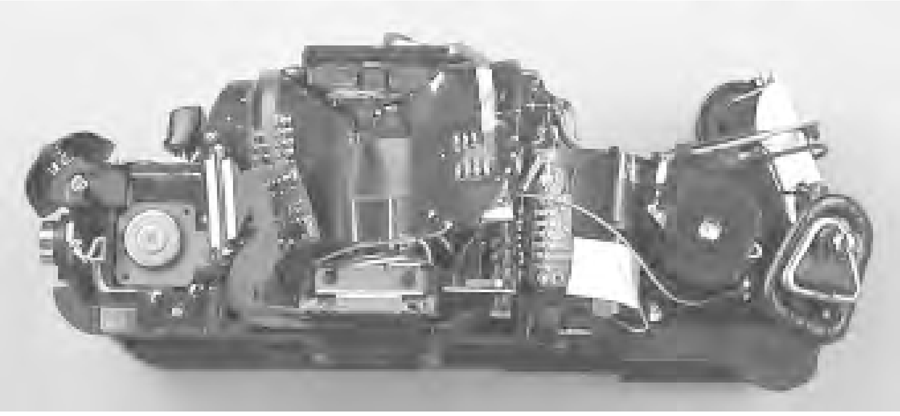


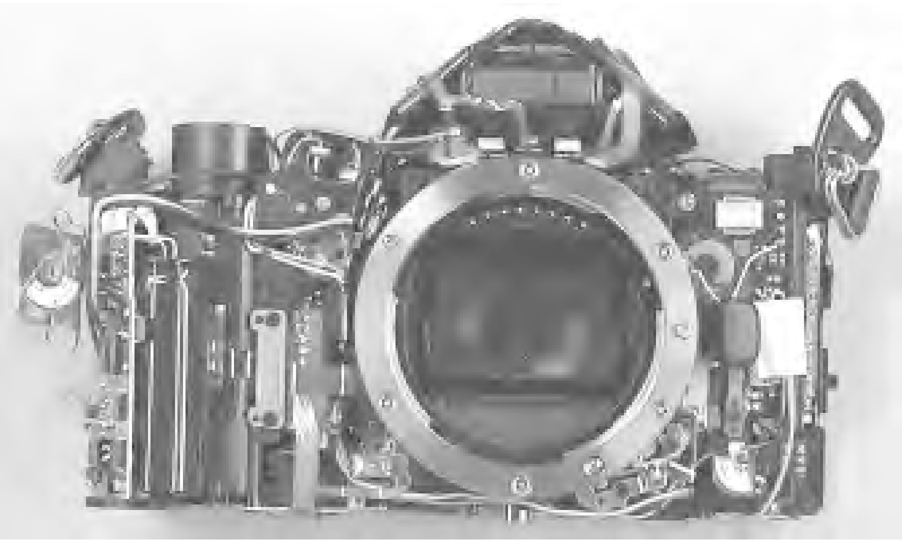
Fig. 11

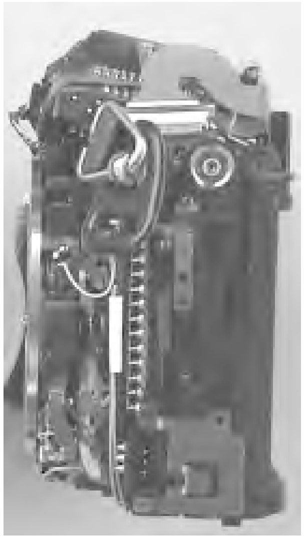
Lift up the lid of the connector socket (FPC-A ASSY). Then insert the flex of SPC1 HOLDER ASSY and close the lid.

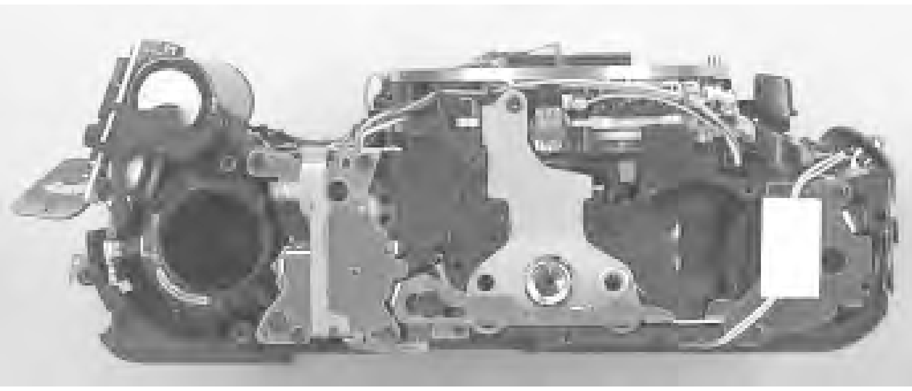


Wire Arrangement



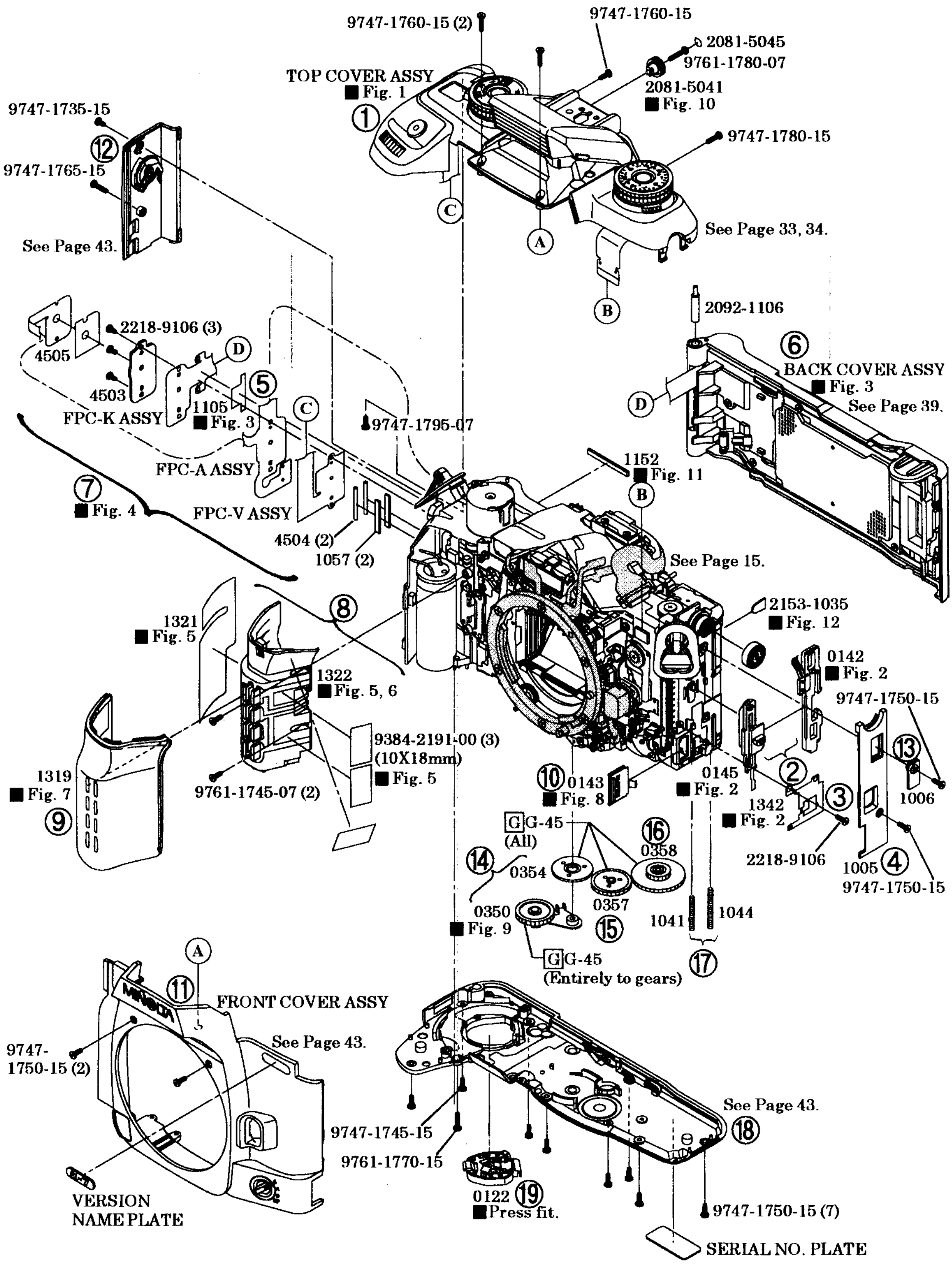






6 Exterior Parts Installation

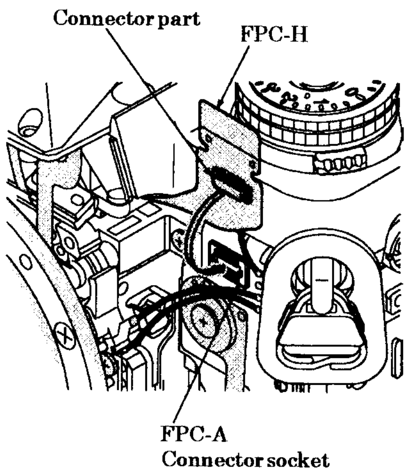
Install in numerical order; 1 to 19.



REPAIR GUIDE

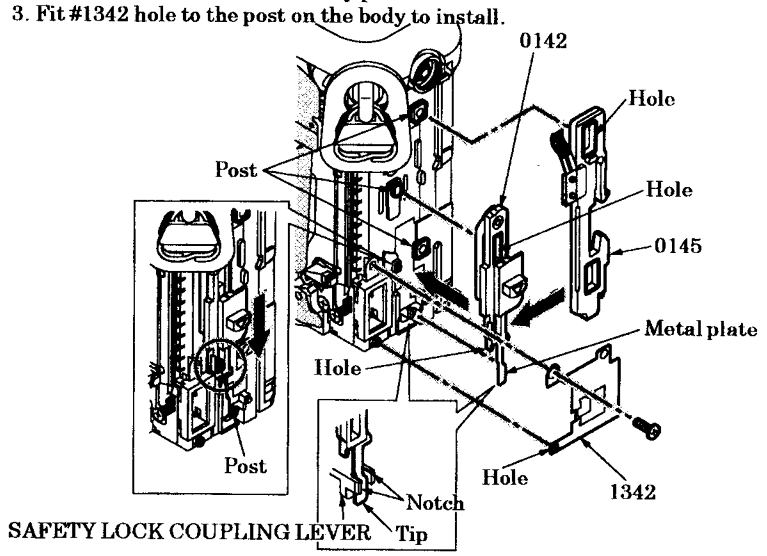
■ Fig. 1

Arrange the lead wires as in figure, and press-fit the connector part of FPC-H to the connector socket (FPC-A ASSY).



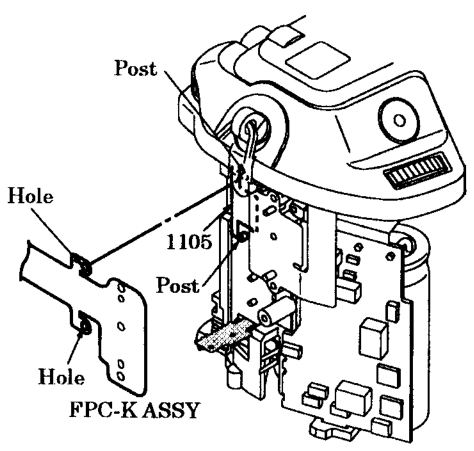
■ Fig. 2

1. Install #0142 to the body so that the body post fits to the bottom of its slot, then slide it down in the arrow direction.
   Confirm that tip of the metal plate (#0142) engages to SAFETY LOCK COUPLING LEVER.
2. Fit the slots of #0145 to the body post.
3. Fit #1342 hole to the post on the body to install.



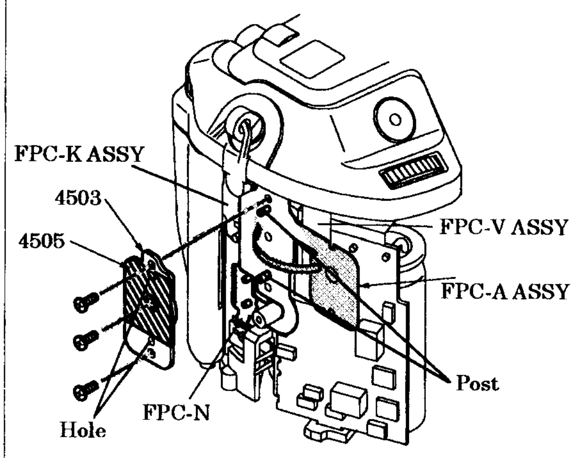
■ Fig. 3

1. Stick #1105 to the designated position.
2. Fit FPC-K ASSY to the post on the body, then affix with #1105.



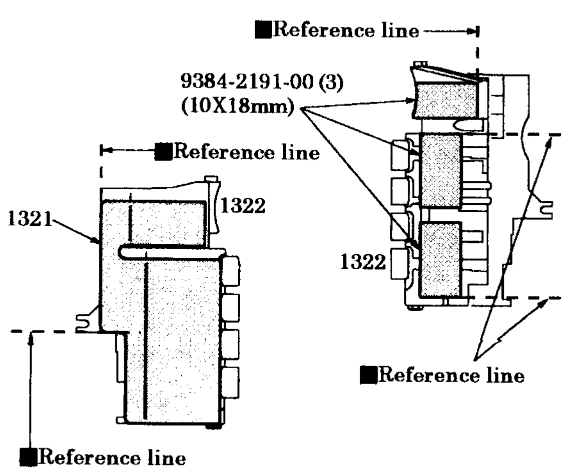
■ Fig. 4

1. Fit the flexes to the post on the body as illustrated.
2. Fit #4503 to the post on the body.
3. Stick #4505 to the shaded area, and fold back FPC-A in the arrow direction to stick.



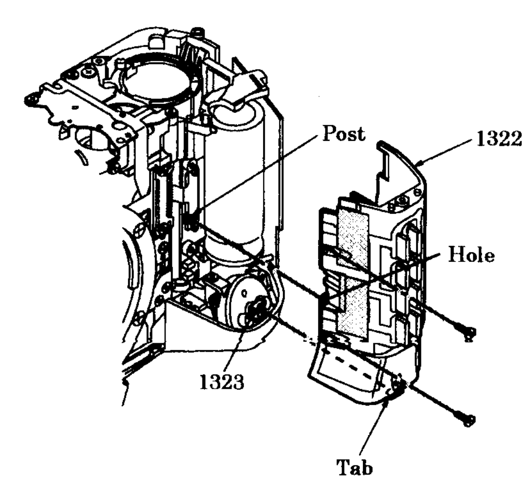
■ Fig. 5

Stick #1321 and the double-faced tape to the designated position of #1322.



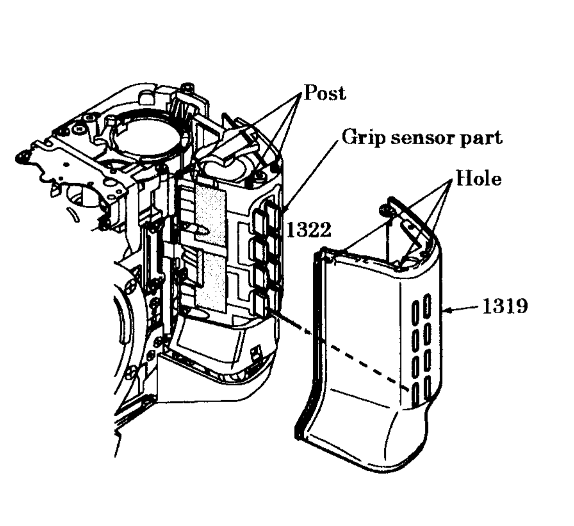
■ Fig. 6

Fit #1322 tab to #1323 of TOP COVER ASSY, and #1322 hole to the post on the body.



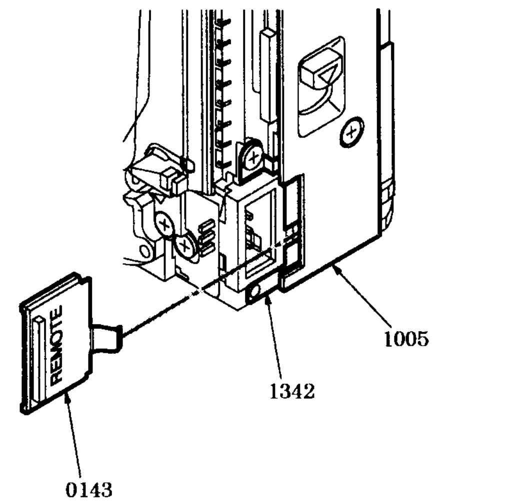
■ Fig. 7

Fit #1319 to the grip sensor part of #1322 then fit the top holes to the posts on the body.



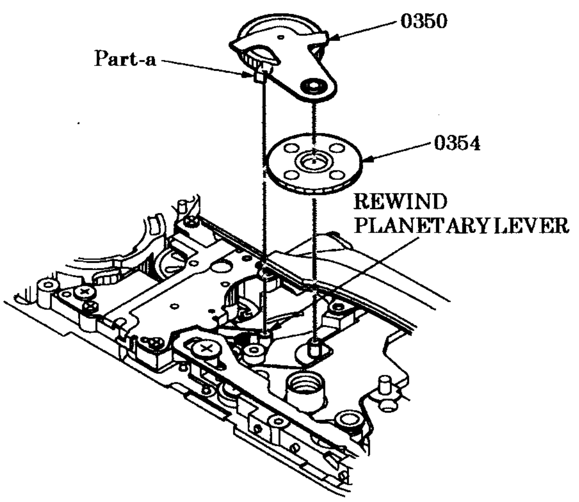
■ Fig. 8

Insert #0143 between #1005 and #1342.



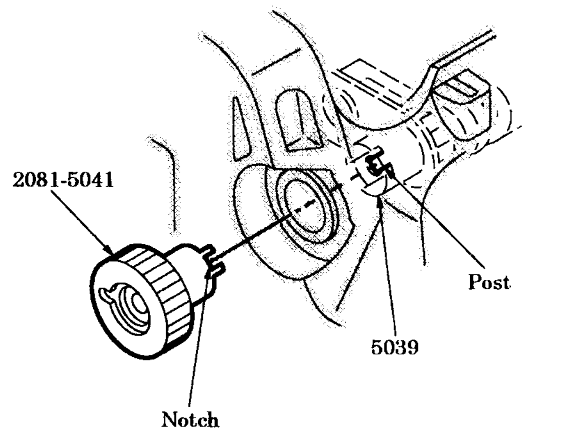
■ Fig. 9

Install #0354 and #0350.
Confirm that REWIND PLANETARY LEVER fits to part-a of #0350.



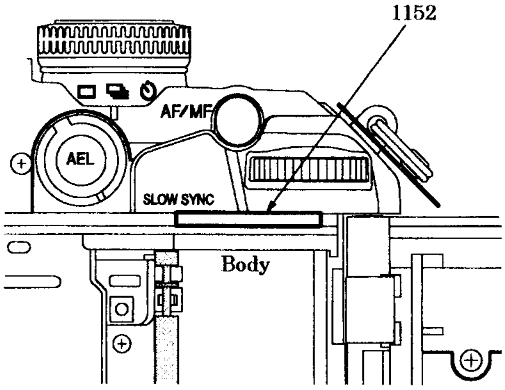
■ Fig. 10

Align the notch of #2081-5041 with #5039 post to install.



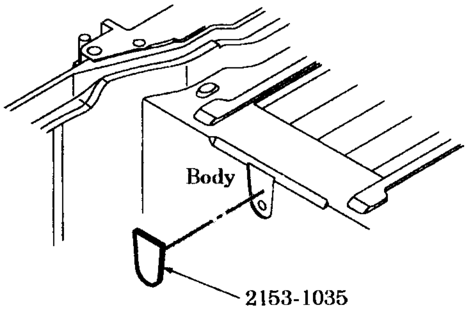
■ Fig. 11

Stick #1152 to the body.



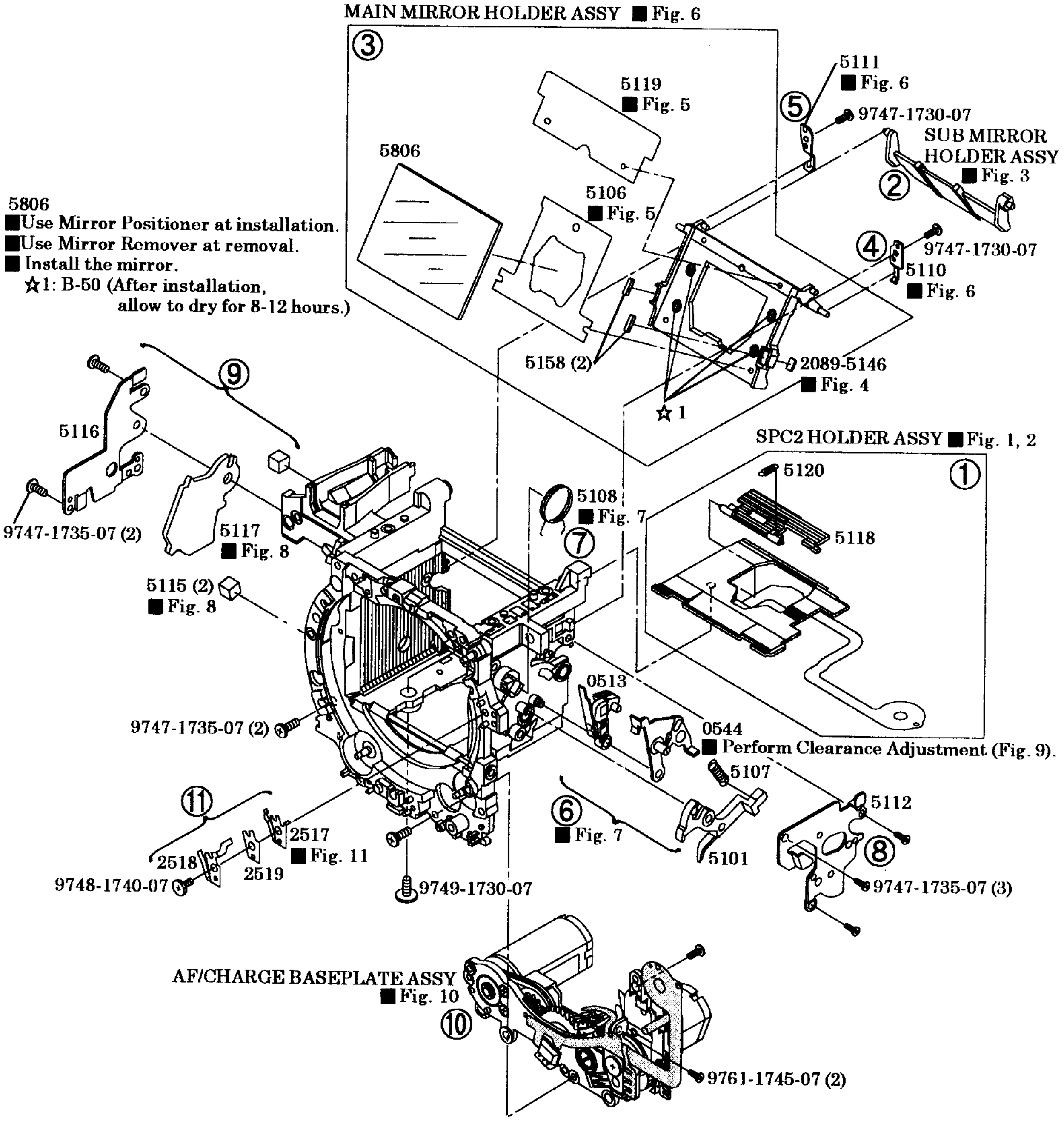
■ Fig. 12

Stick #2153-1035 to the body.



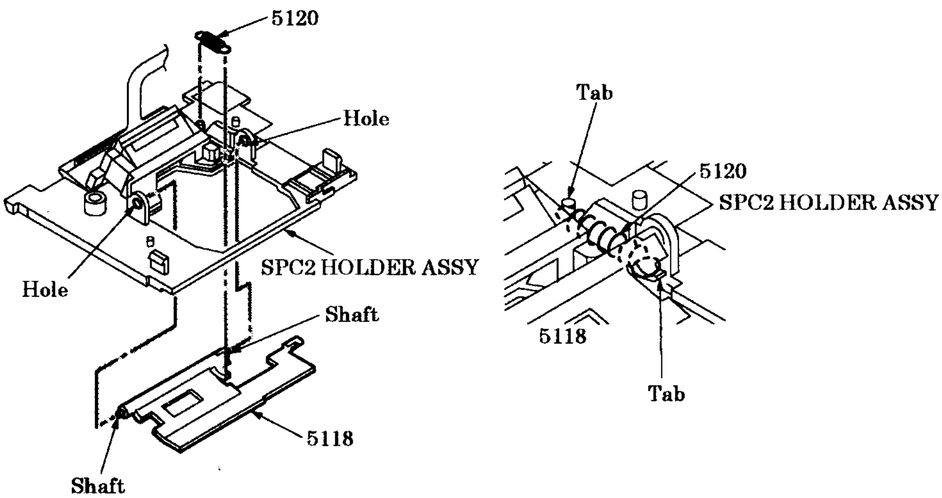
■ MIRROR BOX Assembly-I

Install in numerical order; 1 to 11.
Perform Clearance Adjustment of the sub-mirror holder before installing 10 and after referring to Fig. 9.



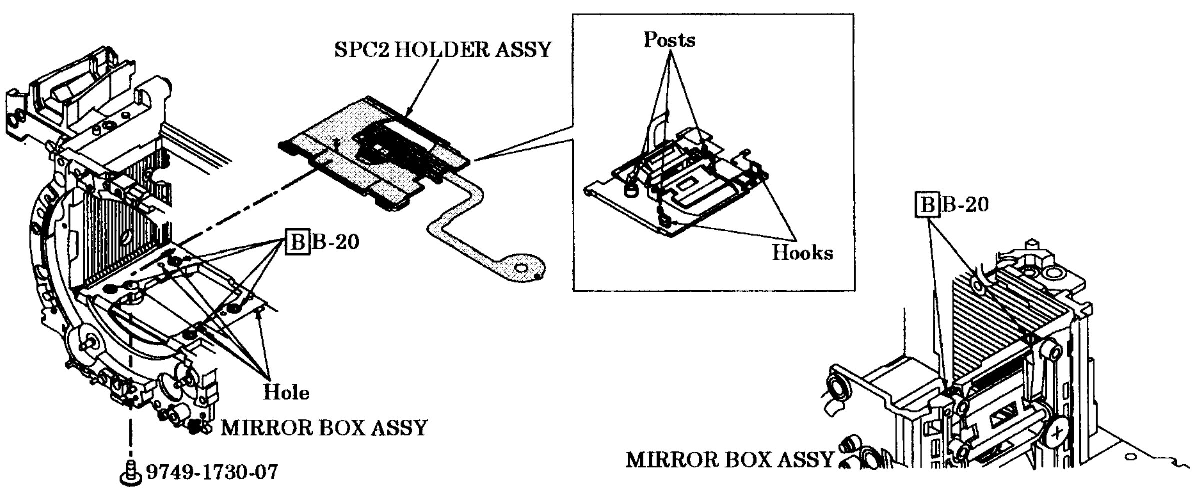
■ Fig. 1

1. Insert #5118 shafts to SPC2 HOLDER ASSY.
2. Hook #5120 as in figure.



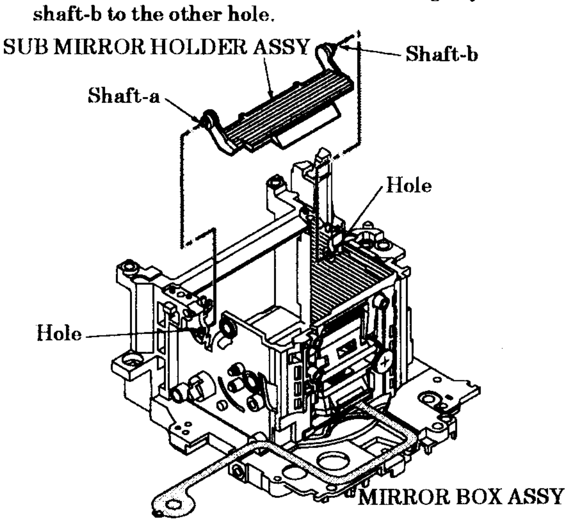
■ Fig. 2

1. Apply B-20 to the designate points.
2. Fit SPC2 HOLDER ASSY properly to the holes on MIRROR BOX ASSY.
3. Apply B-20 to the designated points.



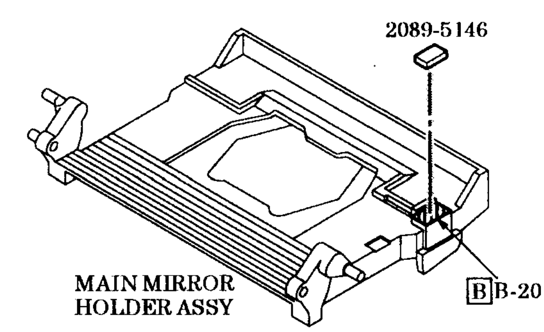
■ Fig. 3

1. Insert shaft-a of SUB MIRROR HOLDER ASSY to the designated hole of MIRROR BOX ASSY.
2. Bend SUB MIRROR HOLDER ASSY slightly to fit shaft-b to the other hole.



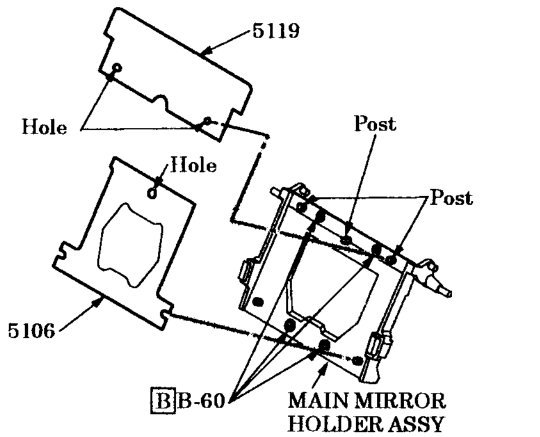
■ Fig. 4

Apply B-20 to the shaded area, and install #2089-5146.



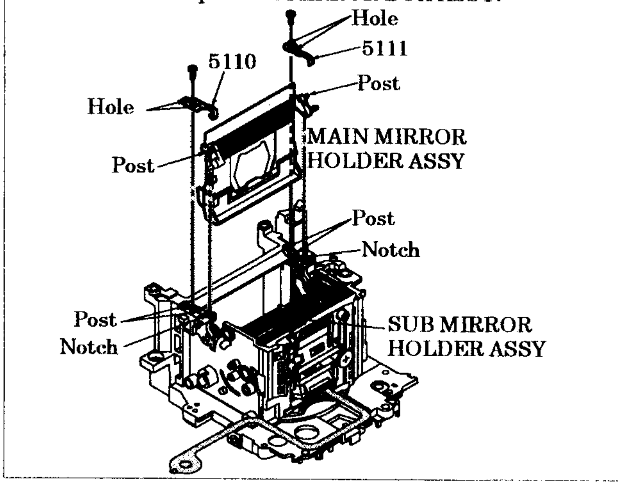
■ Fig. 5

1. Apply B-60 to the designated points of MAIN MIRROR HOLDER ASSY.
2. Fit #5119 to the posts of MAIN MIRROR HOLDER ASSY.
3. Fit #5106 to the posts of MAIN MIRROR HOLDER ASSY.



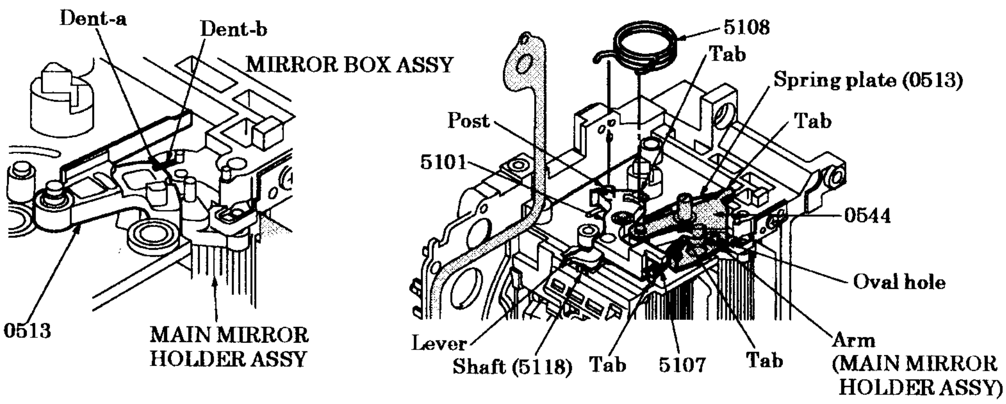
■ Fig. 6

1. Insert MAIN MIRROR HOLDER ASSY to the upper side of SUB MIRROR HOLDER ASSY, and fit the posts to the notches.
2. Fit #5111 to the posts on MIRROR BOX ASSY.
3. Fit #5110 to the posts on MIRROR BOX ASSY.



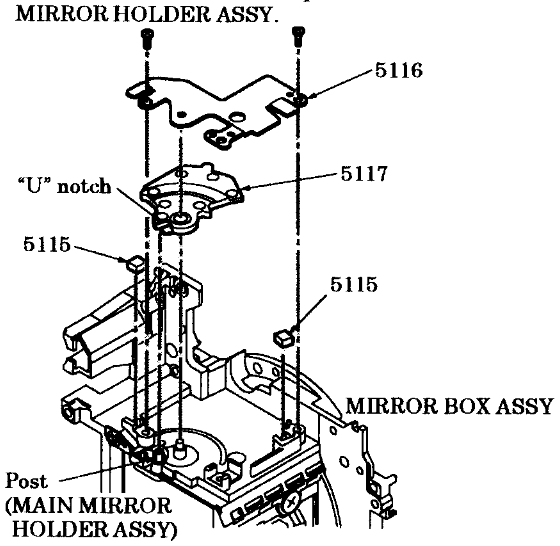
■ Fig. 7

1. Hold down MAIN MIRROR HOLDER ASSY, then install #0513 aligning dent-a with dent-b on MIRROR BOX ASSY.
2. Hook #5107 to #0544, then install together to MIRROR BOX ASSY.
   Fit the oval hole to the post on the arm of MAIN MIRROR HOLDER ASSY, and set the spring plate of #0513 underneath.
3. Install #5101 so that the shaft of #5118 is caught by its arm.
4. Hook another tip of #5107 to #5101.
5. Hook a tip of #5108 to the post on MIRROR BOX ASSY, and charge it to hook another tip to #5101.



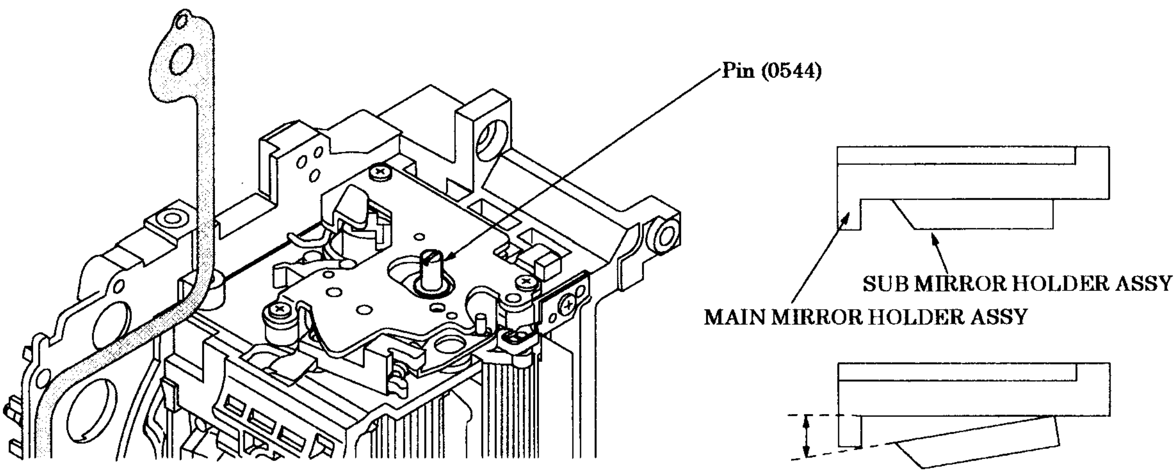
■ Fig. 8

1. Install #5115 to the designated position.
2. Fit "U" notch of #5117 to the post on the arm of MAIN MIRROR HOLDER ASSY.



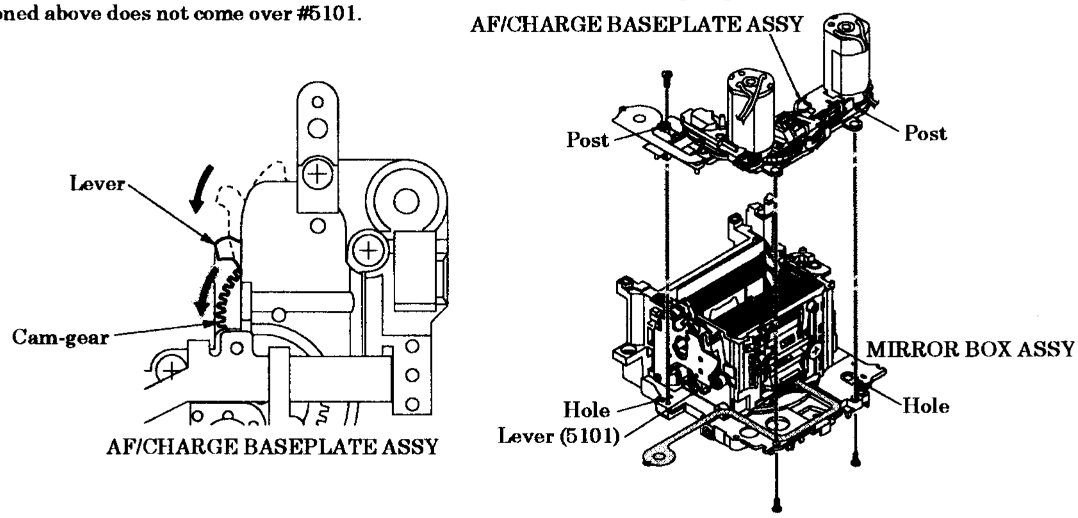
■ Fig. 9

■SUB MIRROR HOLDER ASSY Clearance Adjustment
Observing the MIRROR BOX ASSY from the front, turn #0544 pin until SUB MIRROR HOLDER ASSY mates completely to MAIN MIRROR HOLDER ASSY. No clearance is allowed.



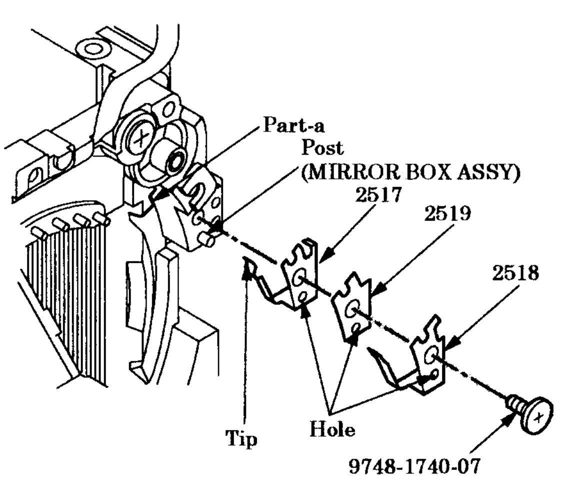
■ Fig. 10

1. Rotate the designated cam-gear in arrow direction while keep pushing the lever against it until the lever descends down to the lowest.
2. Install AF/CHARGE BASEPLATE ASSY to MIRROR BOX ASSY fitting its posts to the holes so that the lever mentioned above does not come over #5101.



■ Fig. 11

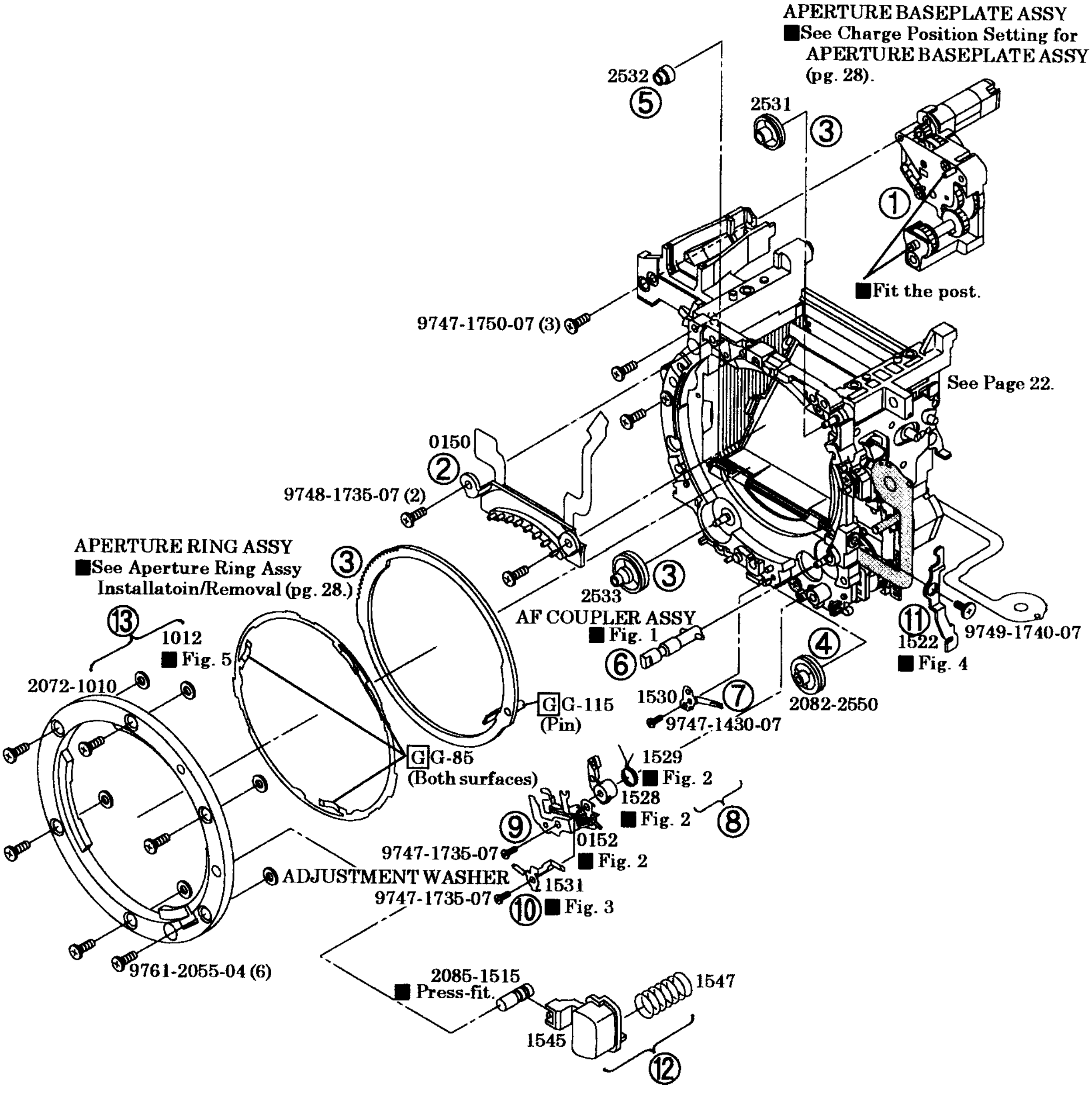
Fit #2517 to the post of the MIRROR BOX ASSY.
Hook its tip to part-a.



REPAIR GUIDE

■ MIRROR BOX Assembly-II

Install in numerical order; 1 to 13.
After assembly, perform AF Coupler Height Adjustment (pg. 29).

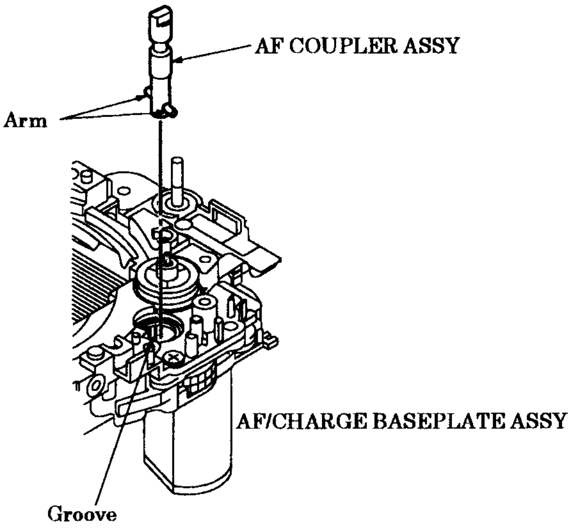


■ADJUSTMENT WASHER

Part No.	T=(mm)
2005-1061-81	0.02
2005-1062-81	0.05
2005-1063-81	0.1

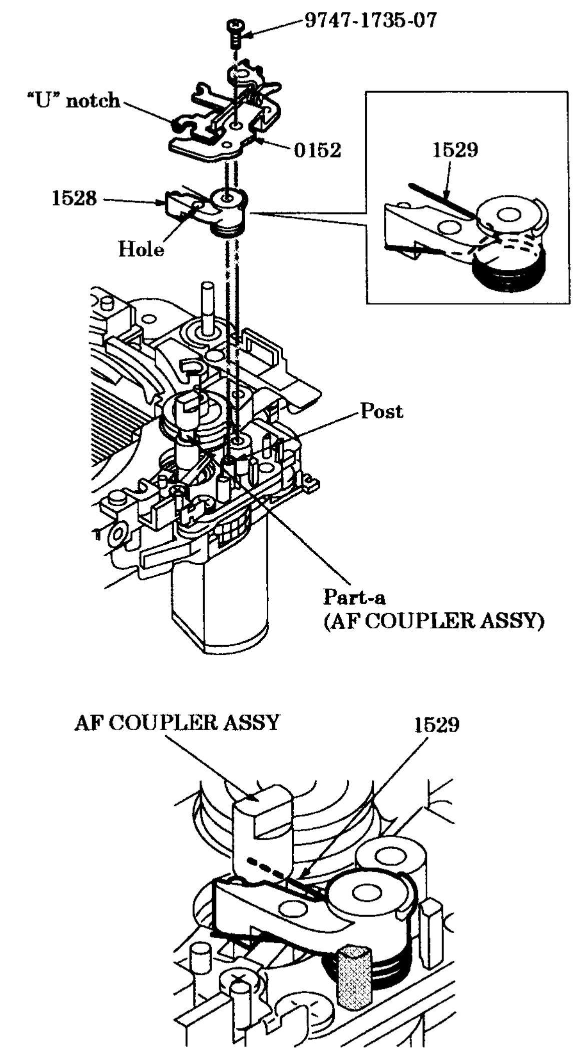
■ Fig. 1

Holding AF COUPLER ASSY obliquely, insert its arms to the groove of AF/CHARGE BASEPLATE ASSY.



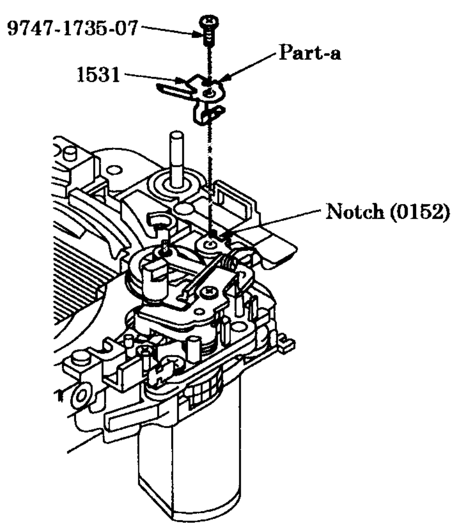
■ Fig. 2

1. Hook #1529 to #1528.
2. Install #1528 to MIRROR BOX ASSY, then turn #1529 to hook to AF COUPLER ASSY.
3. Install #0152 to MIRROR BOX ASSY fitting its "U" notch to part-a of AF COUPLER ASSY.



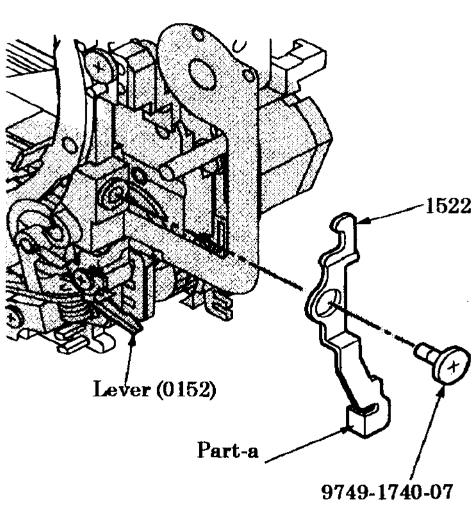
■ Fig. 3

Align part-a of #1531 to the notch on #0152.



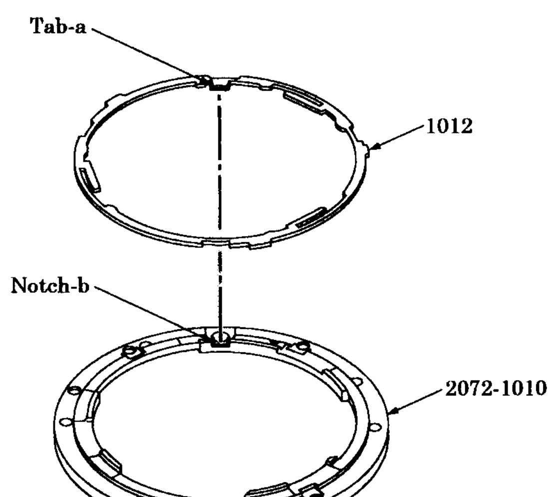
■ Fig. 4

Install #1522 so that part-a is beneath the lever of #0152.



■ Fig. 5

Install #1012 aligning its tab-a to notch-b.



■ APERTURE RING ASSY Removal/Installation

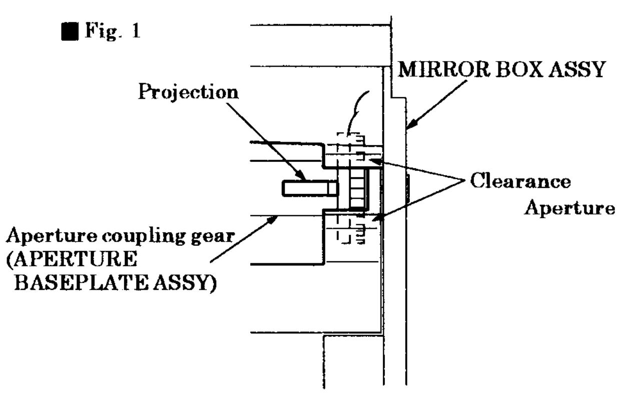
Removal

Turn APERTURE RING ASSY clockwise until it stops. Now the ring can be removed.
Be careful not to turn the aperture coupling gear in APERTURE BASEPLATE ASSY.

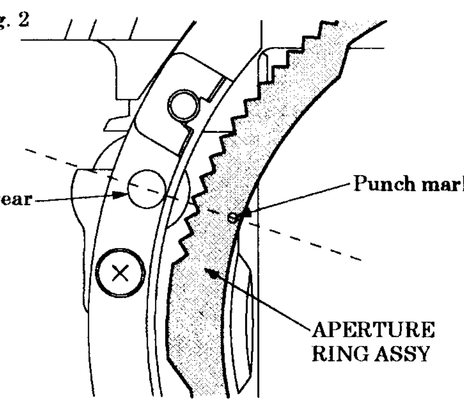
Installation

1. Set APERTURE BASEPLATE ASSY to the default charge position referring to Charge Position Setting procedure, then install to MIRROR BOX ASSY.
   APERTURE BASEPLATE ASSY is at the charge completion position if it has never been removed, or the aperture coupling gear has not been turned after removing APERTURE RING ASSY.
2. Confirm that the projection on the aperture coupling gear is located at the center of the clearance. (Fig. 1)
3. Install APERTURE RING ASSY so that the punch mark is positioned as illustrated. (Fig. 2)

■ Fig. 1



■ Fig. 2



■ APERTURE BASEPLATE ASSY Setting

Firstly confirm APERTURE BASEPLATE ASSY is at the default position (Spare parts are supplied at the default position) then set the unit to the charge position before installation.

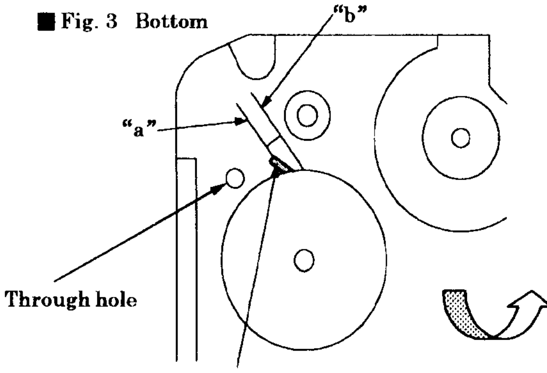
Default Position Check/Setting

1. Confirm on which side ("a" or "b" in Fig. 3) in the square opening (of APERTURE BASEPLATE ASSY) the spring leg lies.
2. Turn the aperture reduction gear in the direction opposite to the spring location ("a" or "b" in Fig. 4) until the spring leg moves over to the other side.
   e.g. If the spring lies at "a" in Fig. 3, turn the gear toward "a" in Fig. 4.
3. With the above condition, turn the aperture reduction gear slightly until its through hole aligns with the through hole of the aperture base plate-B. This is the default position.

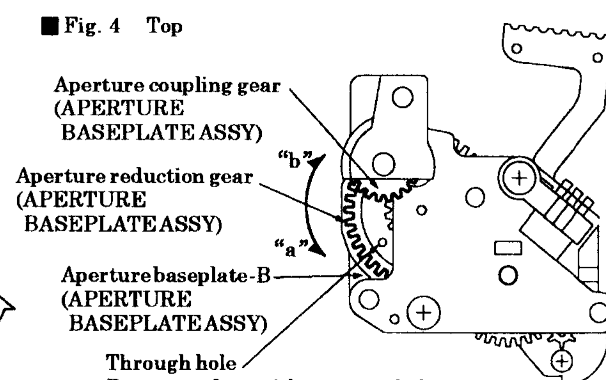
Charge Position Setting

1. Make sure that APERTURE BASEPLATE ASSY is set to the default position.
2. Viewed from the top, turn the aperture reduction gear clockwise by 3 turns until the through holes align again.

■ Fig. 3 Bottom



■ Fig. 4 Top



■ AF Coupler Height Adjustment

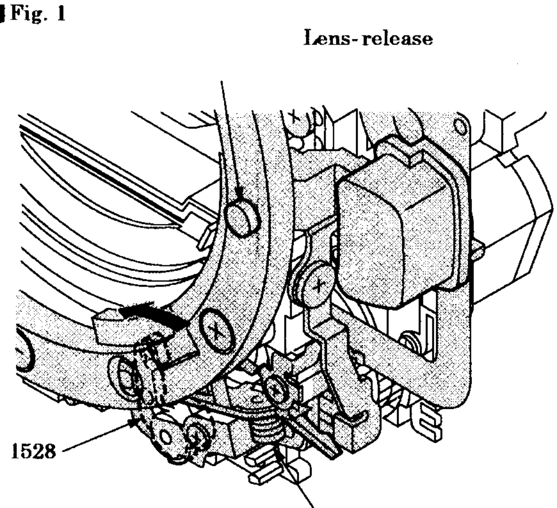
Check

Press the designated position of #1528 (Fig. 1) to extrude the AF coupler from the bayonet mount. Confirm that height of both the AF coupler and the lens lock pin meets the standard.

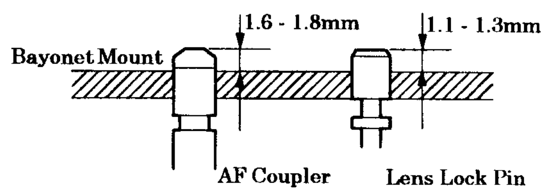
Adjustment

Turn the eccentric pin (Fig. 1) so that both the AF coupler and the lens lock pin suffice the standard.

■ Fig. 1

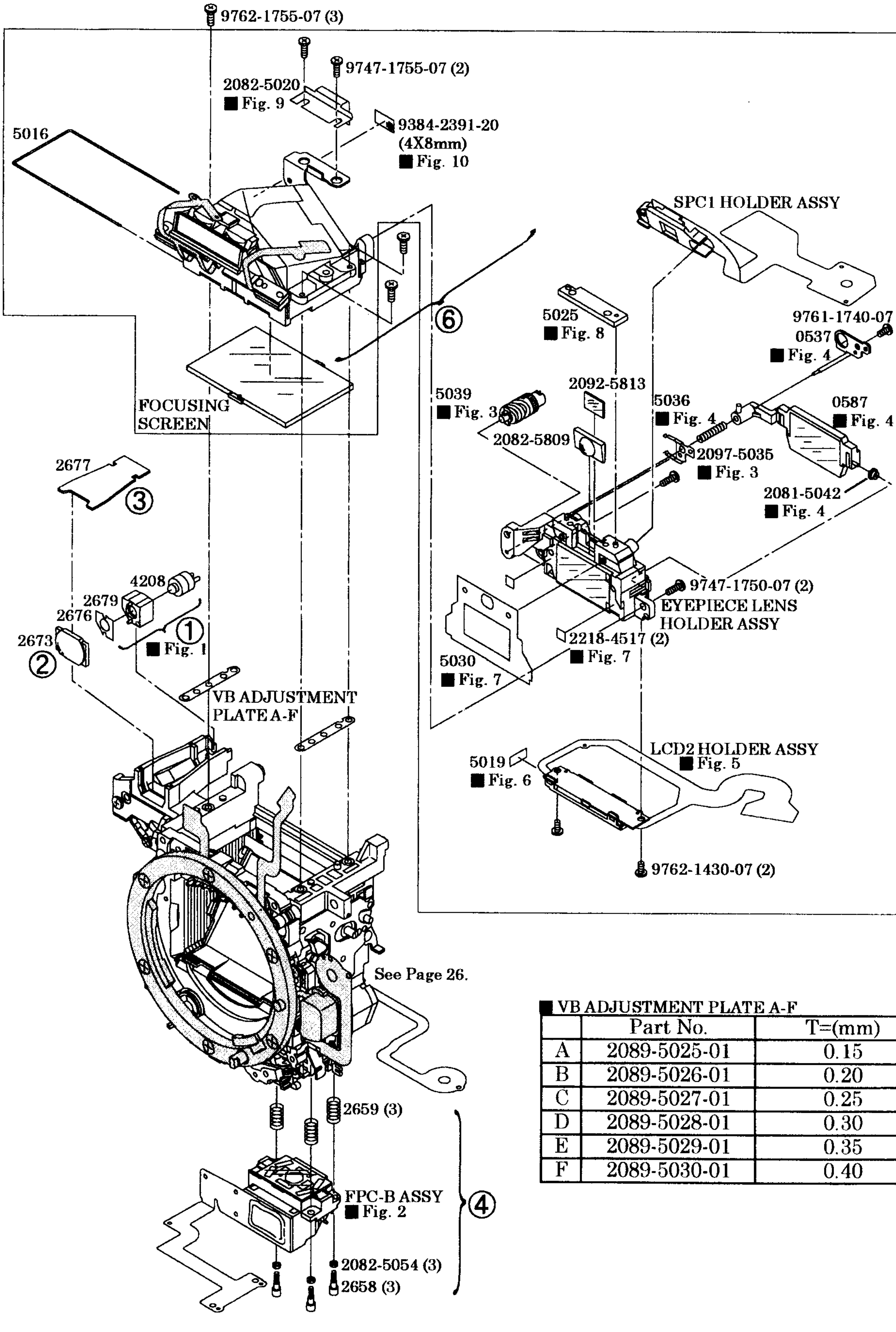


■ Standard



■ MIRROR BOX Assembly-III

Assemble in numerical order; 1 to 6.

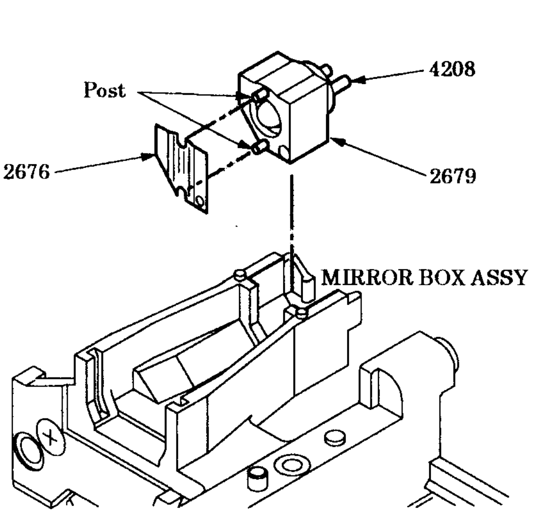


■ VB ADJUSTMENT PLATE A-F

	Part No.	T=(mm)
A	2089-5025-01	0.15
B	2089-5026-01	0.20
C	2089-5027-01	0.25
D	2089-5028-01	0.30
E	2089-5029-01	0.35
F	2089-5030-01	0.40

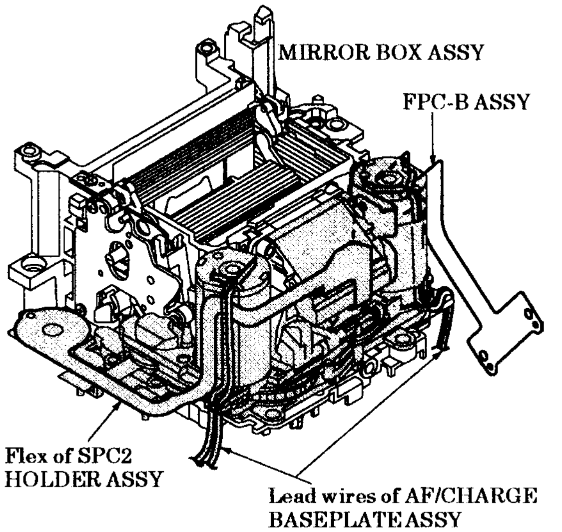
■ Fig. 1

Fit #4208 into #2679, then fit #2676 to the posts on #2679 to install.



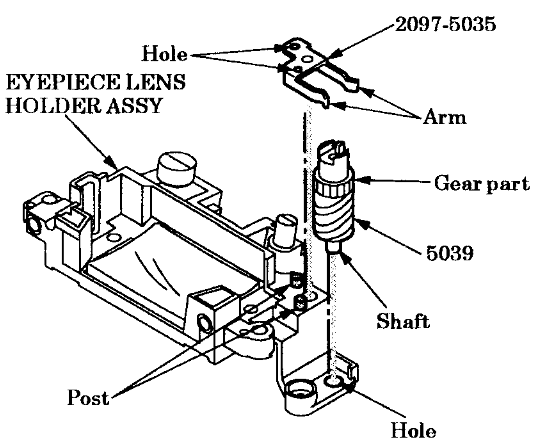
■ Fig. 2

Arrange the flexes and the lead wires.



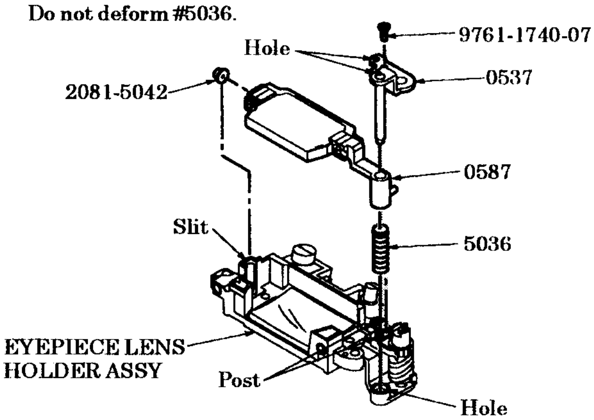
■ Fig. 3

1. Fit #2097-5035 to the posts of EYEPIECE LENS HOLDER ASSY.
2. Fit #5039 to the hole on EYEPIECE LENS HOLDER ASSY and between arms of #2097-5035.



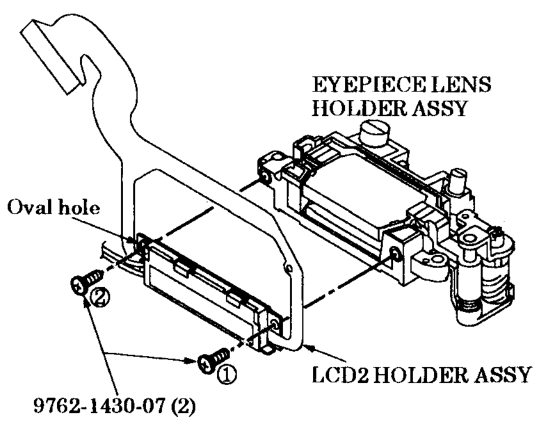
■ Fig. 4

1. Insert #5036 to the hole of EYEPIECE LENS HOLDER ASSY.
2. Fit #2081-5042 to #0587, and install together to EYEPIECE LENS HOLDER ASSY fitting #2081-5042 along the slit.
3. Fit #0537 to the post of EYEPIECE LENS HOLDER ASSY to install.
   Do not deform #5036.



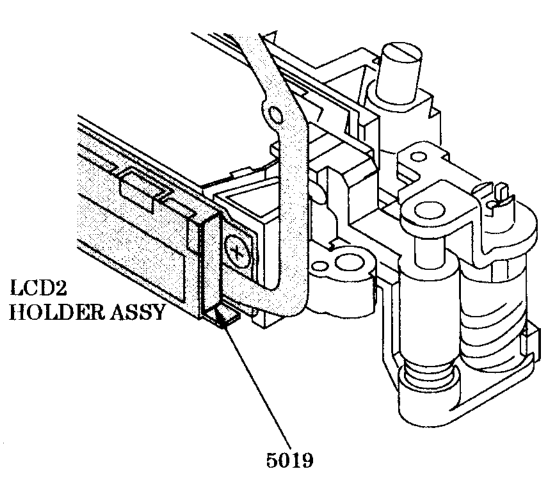
■ Fig. 5

Install LCD2 HOLDER ASSY to EYEPIECE LENS HOLDER ASSY, and affix with screws in numerical order.
Be sure to fasten screw-2 at the center of the oval hole.



■ Fig. 6

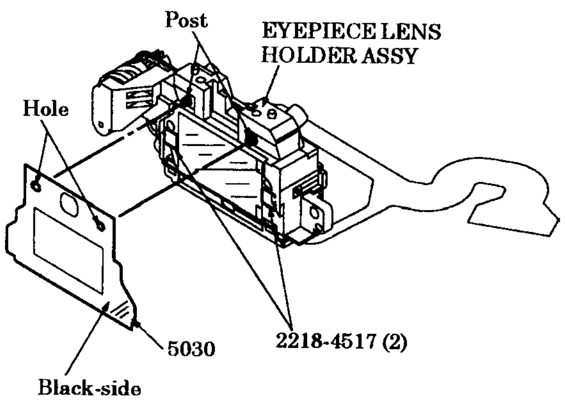
Stick #5019 to the designated position.



REPAIR GUIDE

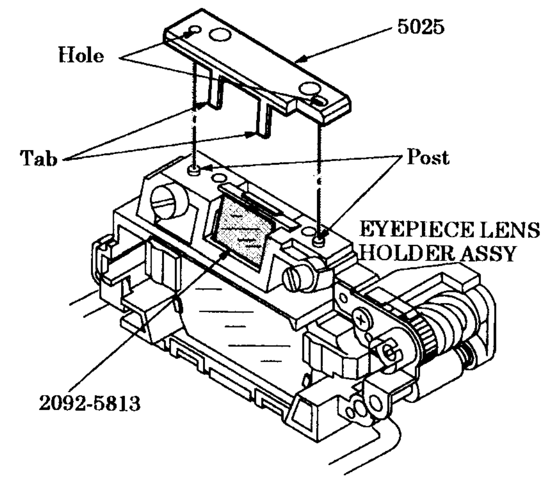
■ Fig. 7

1. Stick #2218-4517 to the designated position.
2. Fit #5030 to the posts of EYEPIECE LENS HOLDER ASSY so that the black side is oriented outward.



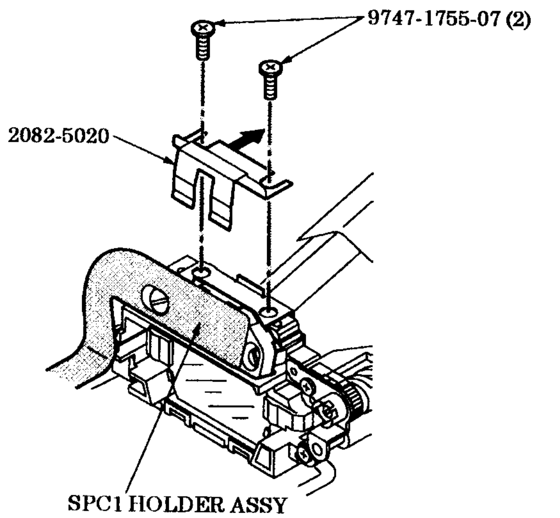
■ Fig. 8

Fit #5025 to the posts of EYEPIECE LENS HOLDER ASSY to install.
Make sure #2092-5813 is held beneath its tabs.



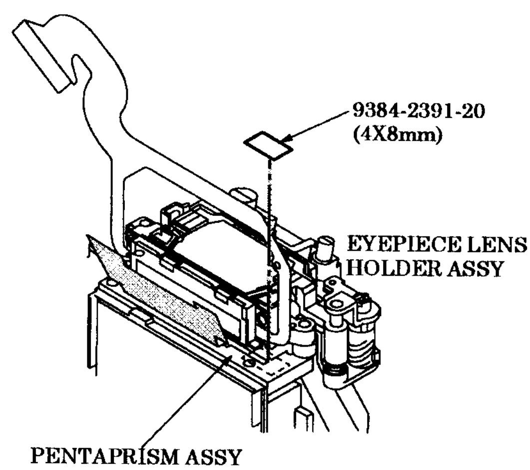
■ Fig. 9

Press fit #2082-5020 in the arrow direction to affix SPC1 HOLDER ASSY.



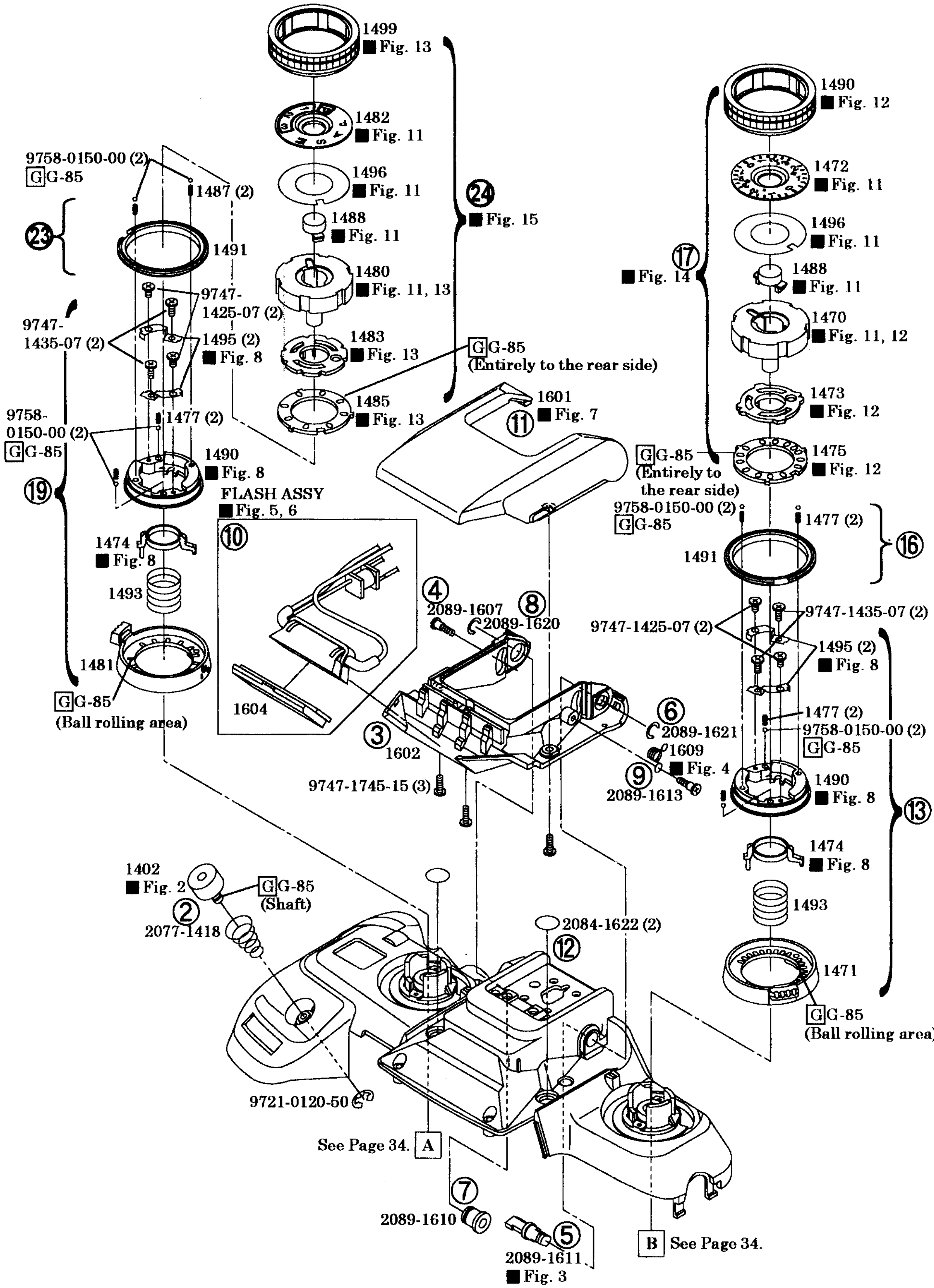
■ Fig. 10

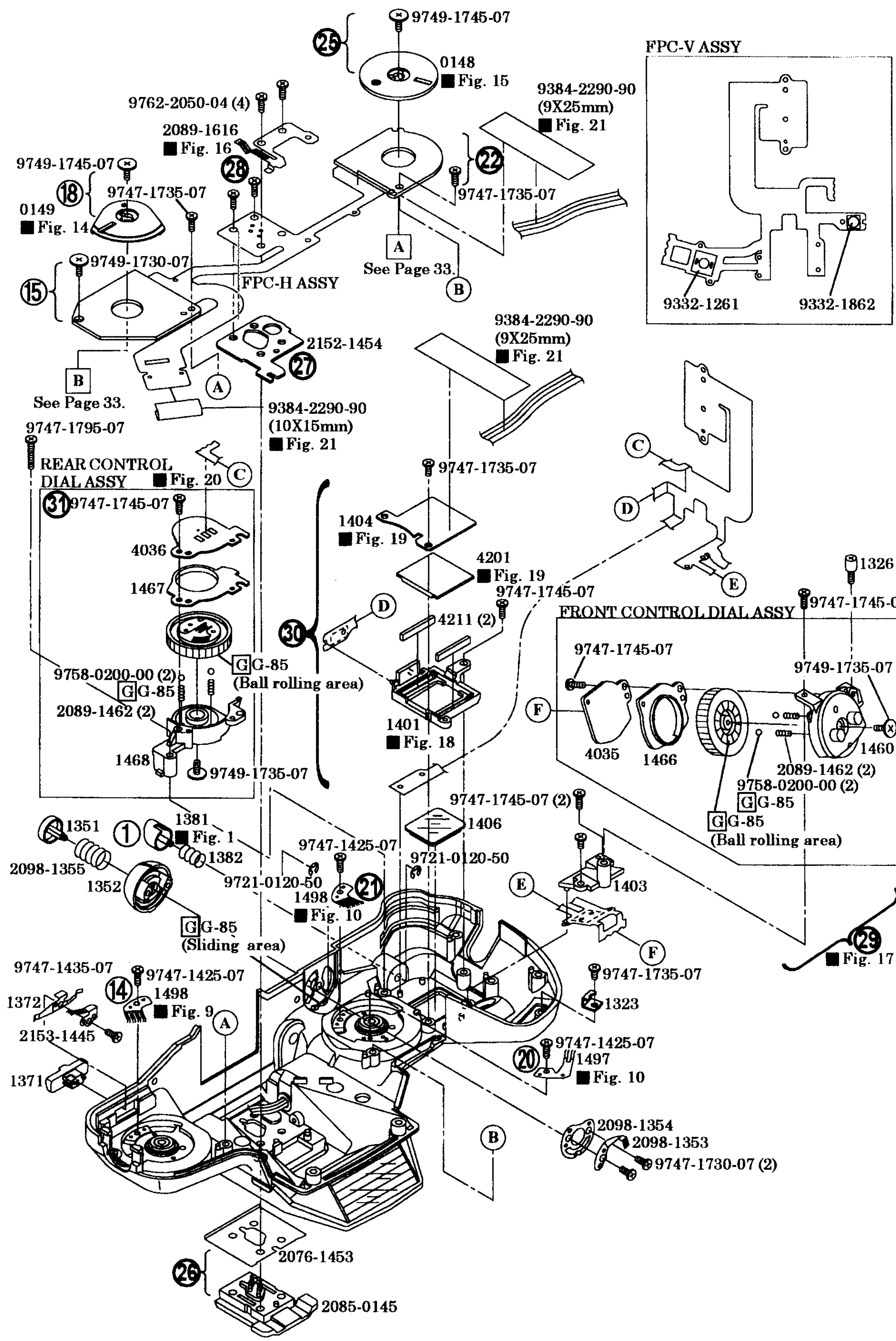
Stick the acetate tape to the designated position.



■ TOP COVER Assembly

Assemble in numerical order; 1 to 31. (Continued to the next page)

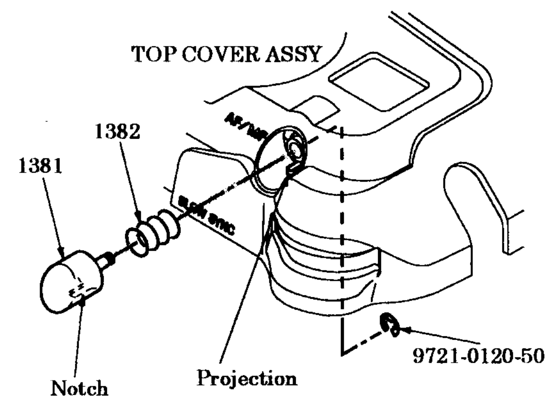




9749-1745-07
0148
■ Fig. 15
FPC-V ASSY
9384-2290-90
(9X25mm)
■ Fig. 21
9762-2050-04 (4)
2089-1616
■ Fig. 16
9749-1745-07
9747-1735-07
0149
■ Fig. 14
9747-1735-07
9749-1730-07
FPC-H ASSY
A
See Page 33.
B
9332-1261
9332-1862
9384-2290-90
(9X25mm)
■ Fig. 21
2152-1454
B
See Page 33.
A
9384-2290-90
(10X15mm)
■ Fig. 21
9747-1795-07
REAR CONTROL
DIAL ASSY
■ Fig. 20
C
9747-1745-07
4036
1467
9747-1735-07
1404
■ Fig. 19
4201
■ Fig. 19
9747-1745-07
C
D
E
1326
9747-1745-07
FRONT CONTROL DIAL ASSY
D
4211 (2)
G G-85
(Ball rolling area)
9758-0200-00 (2)
G G-85
2089-1462 (2)
1468
9749-1735-07
1401
■ Fig. 18
9747-1745-07
9749-1735-07
F
4035
1466
1460
2089-1462 (2)
9758-0200-00 (2)
G G-85
G G-85
(Ball rolling area)
1351
1381
■ Fig. 1
1382
2098-1355
1352
9747-1425-07
9721-0120-50
1498
■ Fig. 10
9747-1745-07 (2)
1406
9721-0120-50
E
1403
F
■ Fig. 17
G G-85
(Sliding area)
9747-1435-07
9747-1425-07
1498
■ Fig. 9
1372
2153-1445
1371
A
9747-1735-07
1323
9747-1425-07
1497
■ Fig. 10
2098-1354
2098-1353
9747-1730-07 (2)
B
2076-1453
2085-0145

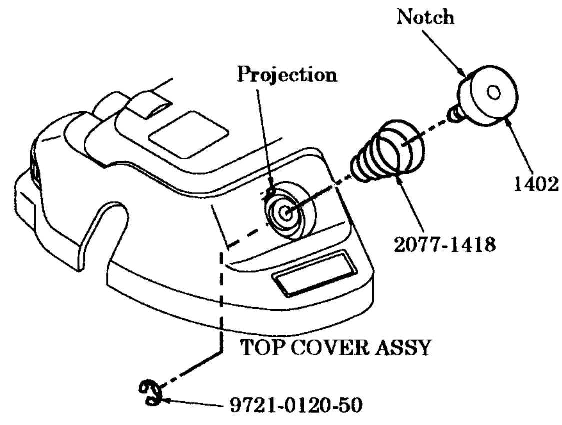
■ Fig. 1

Fit #1382 to #1381, then install them together aligning the notch with the projection of TOP COVER ASSY.



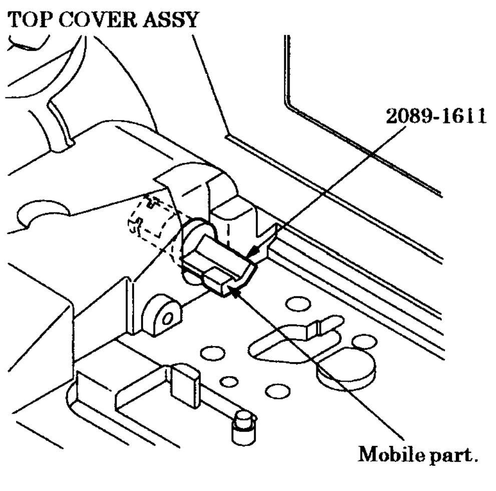
■ Fig. 2

Fit #2077-1418 to #1402, then install them together aligning the notch with the projection of TOP COVER ASSY.



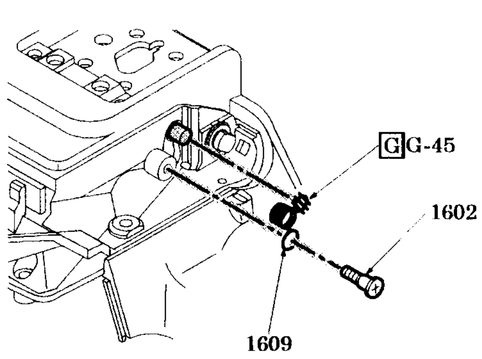
■ Fig. 3

Install #2089-1611 so that the mobile part of #2089-1616 is in position as illustrated.



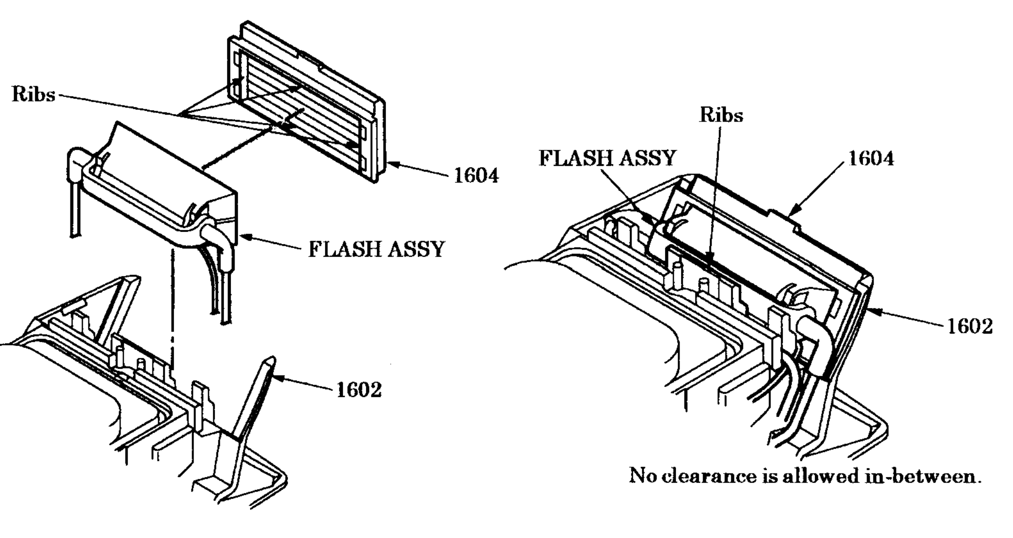
■ Fig. 4

Apply G-45 to the shaded area of #1609, and hook to the posts.



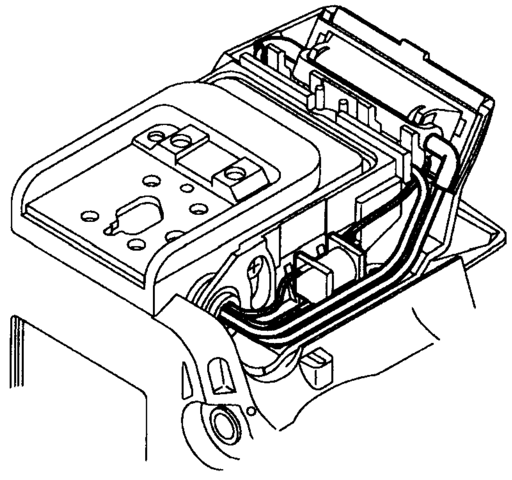
■ Fig. 5

1. Fit FLASH ASSY to #1604 ribs.
2. Install FLASH ASSY and #1604 to #1602 as illustrated.



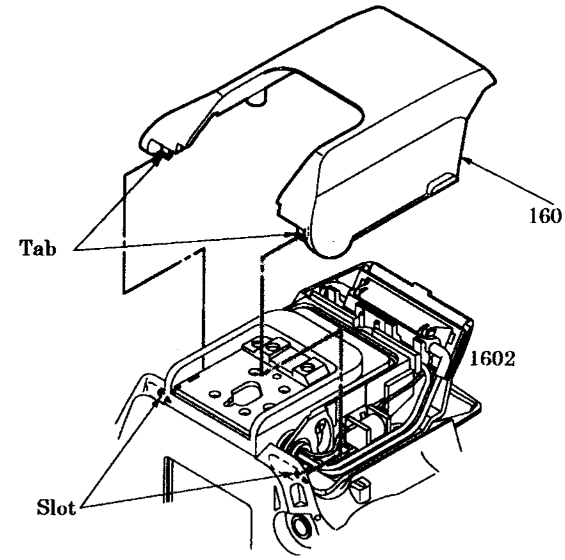
■ Fig. 6

Arrange lead wire as illustrated.



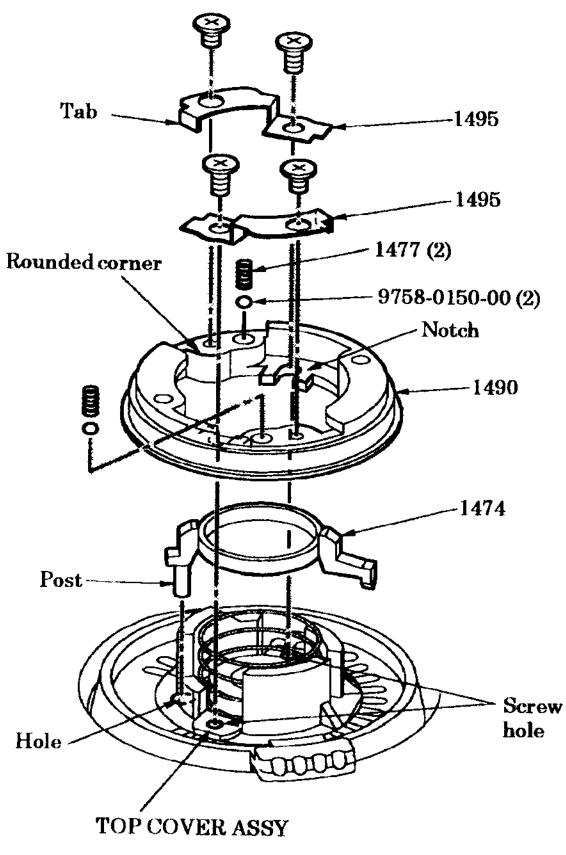
■ Fig. 7

Fit #1601 tabs to the slots.



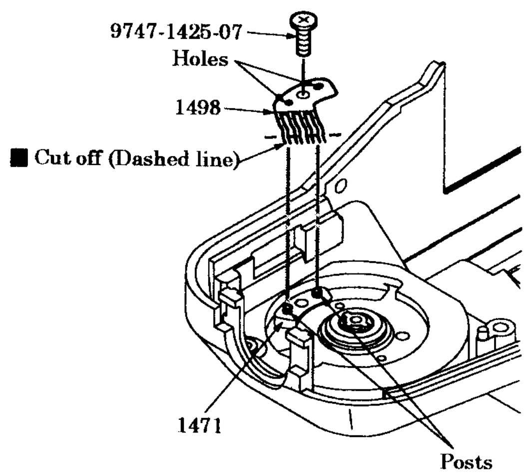
■ Fig. 8

1. Fit the post of #1474 to the hole on TOP COVER ASSY.
2. Align notches of #1490 to each screw hole to install.
3. Put #9758-0150-00 and #1477 together into each hole.
4. Fit #1495 tab to the rounded cornder of #1490.



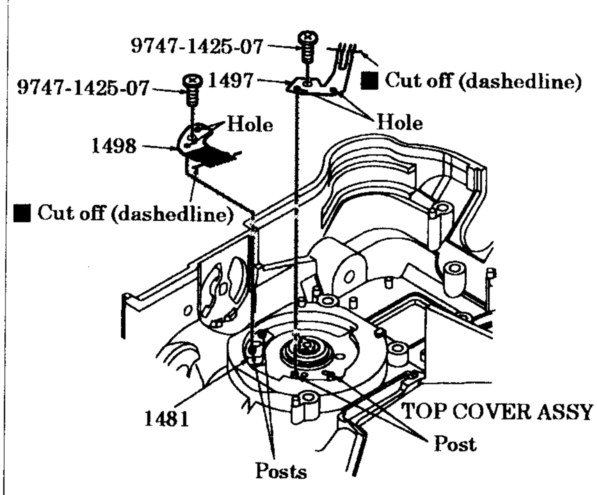
■ Fig. 9

1. Cut off #1498 brush at the dashed line.
2. Fit #1498 to posts on #1471 to install.



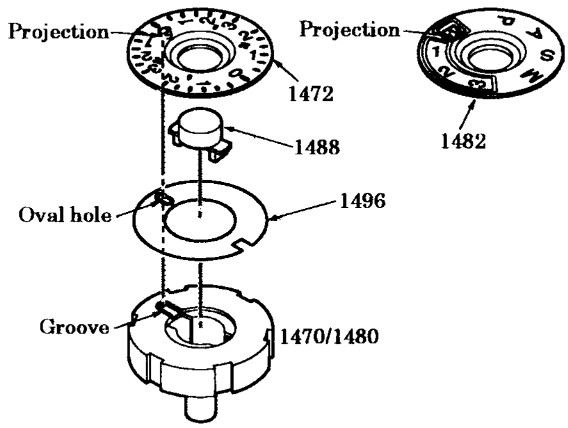
■ Fig. 10

1. Cut off brush of #1497 and #1498 at the dashedline.
2. Fit #1497 to the posts on TOP COVER ASSY to install.
3. Fit #1498 to the posts of #1481.



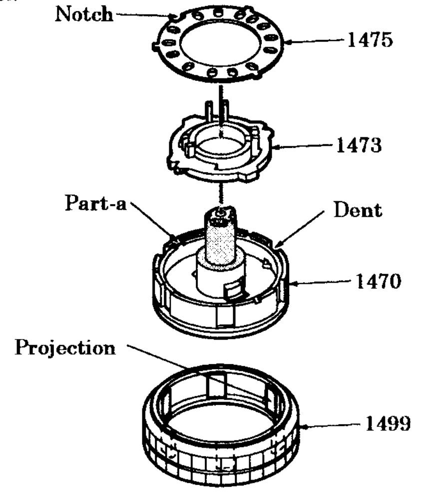
■ Fig. 11

1. Stick #1496 aligning its oval hole to the groove of #1470/1480.
2. Fit #1488 to #1470/1480.
3. Fit the projection of #1472/1482 to the groove of #1470/1480 to install.



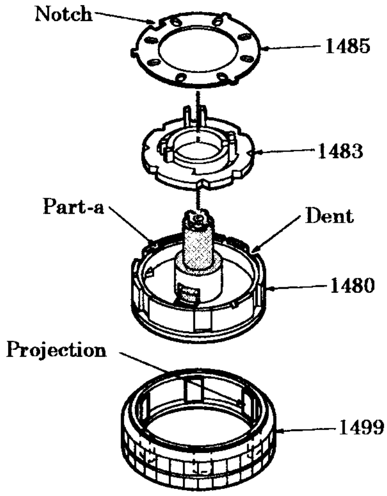
■ Fig. 12

1. Fit #1473 to #1470.
2. Install #1475 to #1470 fitting its notch to part-a.
3. Fit #1499 to #1470 aligning its projections to each dent.



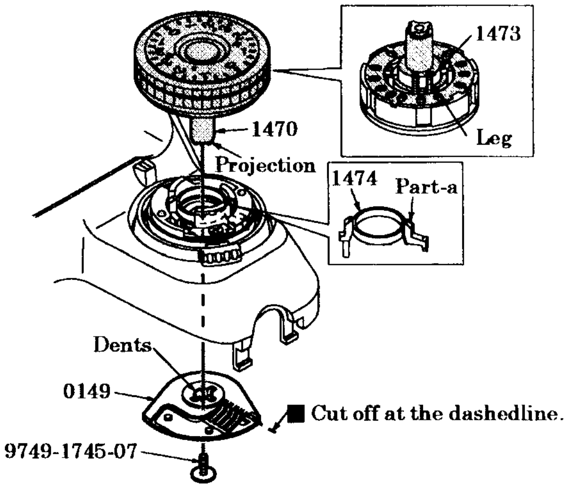
■ Fig. 13

1. Fit #1483 to #1480.
2. Install #1485 to #1480 fitting its notch to part-a.
3. Fit #1499 to #1480 aligning its projections to each dent.



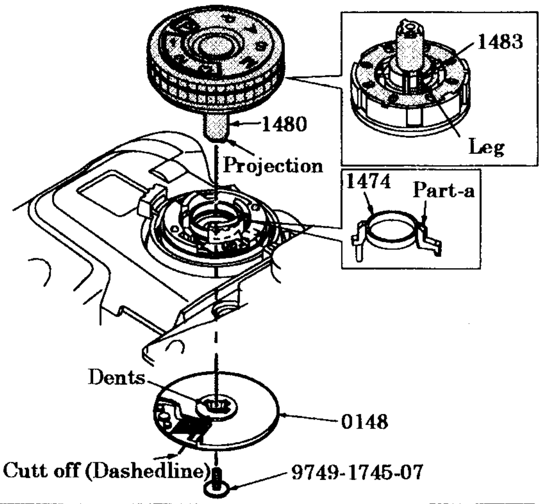
■ Fig. 14

1. Cut off #0149 brush at the dashedline.
2. Fit part-a of #1474 between the longest legs of #1473.
3. Install #0149 aligning its dents with the projection of #1470.



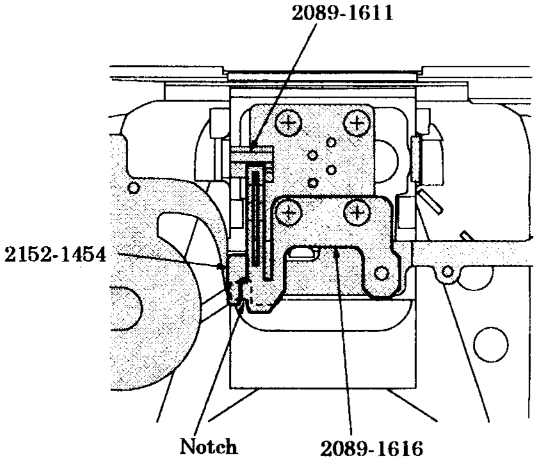
■ Fig. 15

1. Cut off #0148 brush at the dashedline.
2. Fit part-a of #1474 between the longest legs of #1483.
3. Put on #0148 aligning its dents with the projection of #1480.



■ Fig. 16

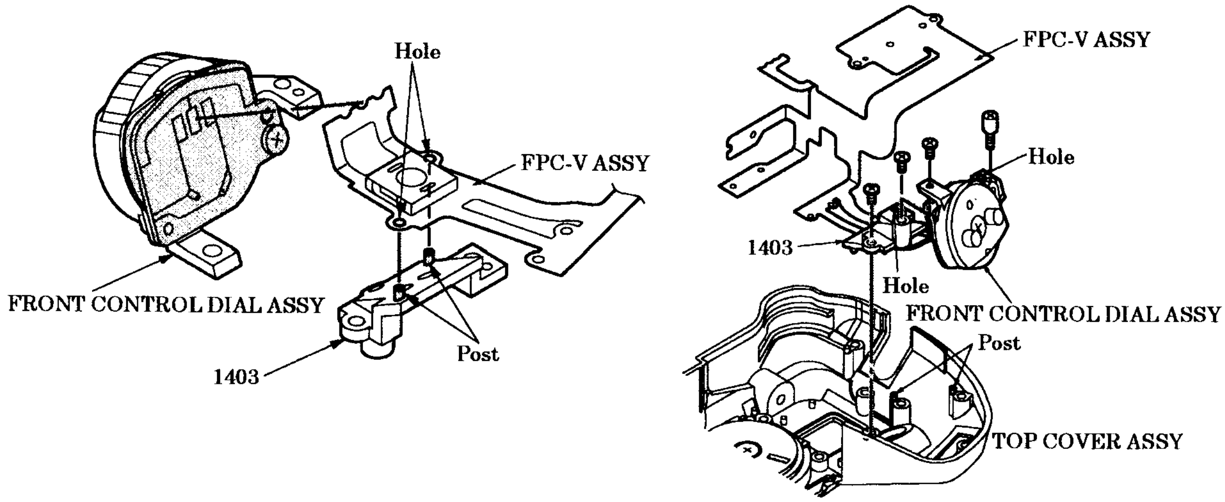
Insert #2089-1616 to the notch of #2152-1454.



REPAIR GUIDE

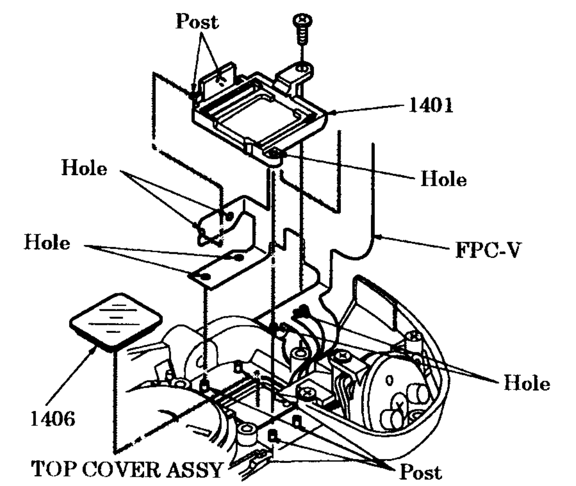
■ Fig. 17

1. Solder FPC-V ASSY to FRONT CONTROL DIAL ASSY.
2. Fit FPC-V to the post of #1403.
3. Hold FRONT CONTROL DIAL ASSY, FPC-V and #1403 together, and fit the unit to posts of TOP COVER ASSY.



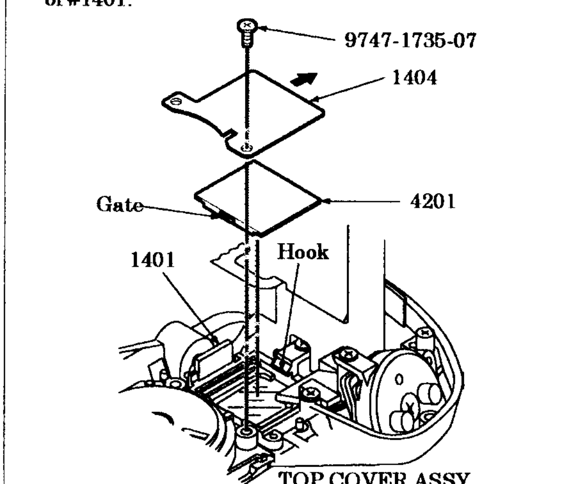
■ Fig. 18

1. Put #1406 onto TOP COVER ASSY.
2. Fit FPC-V to the posts of #1401.
3. Fit FPC-V, then #1401 to the posts of TOP COVER ASSY.



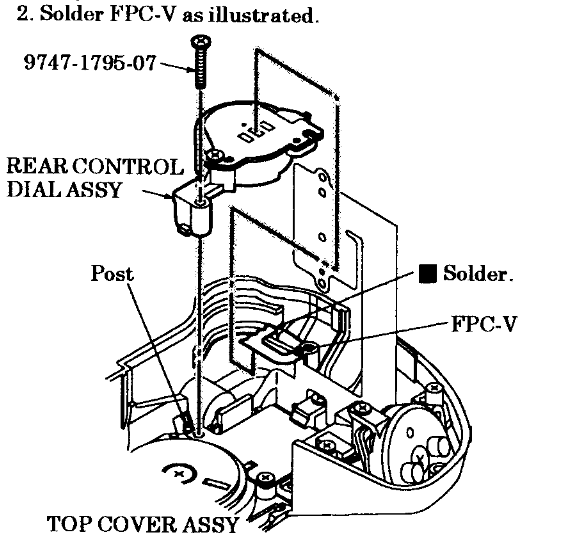
■ Fig. 19

1. Install #4201 so that its gate comes to the designated position.
2. Insert the designated part of #1404 beneath the hook of #1401.



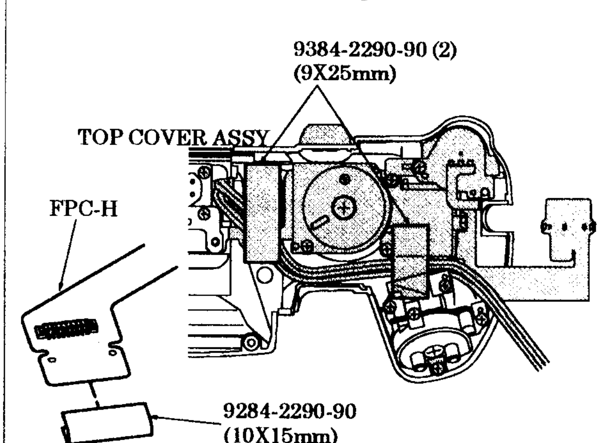
■ Fig. 20

1. Fit REAR CONTROL DIAL ASSY to the posts of the body to install.
2. Solder FPC-V as illustrated.



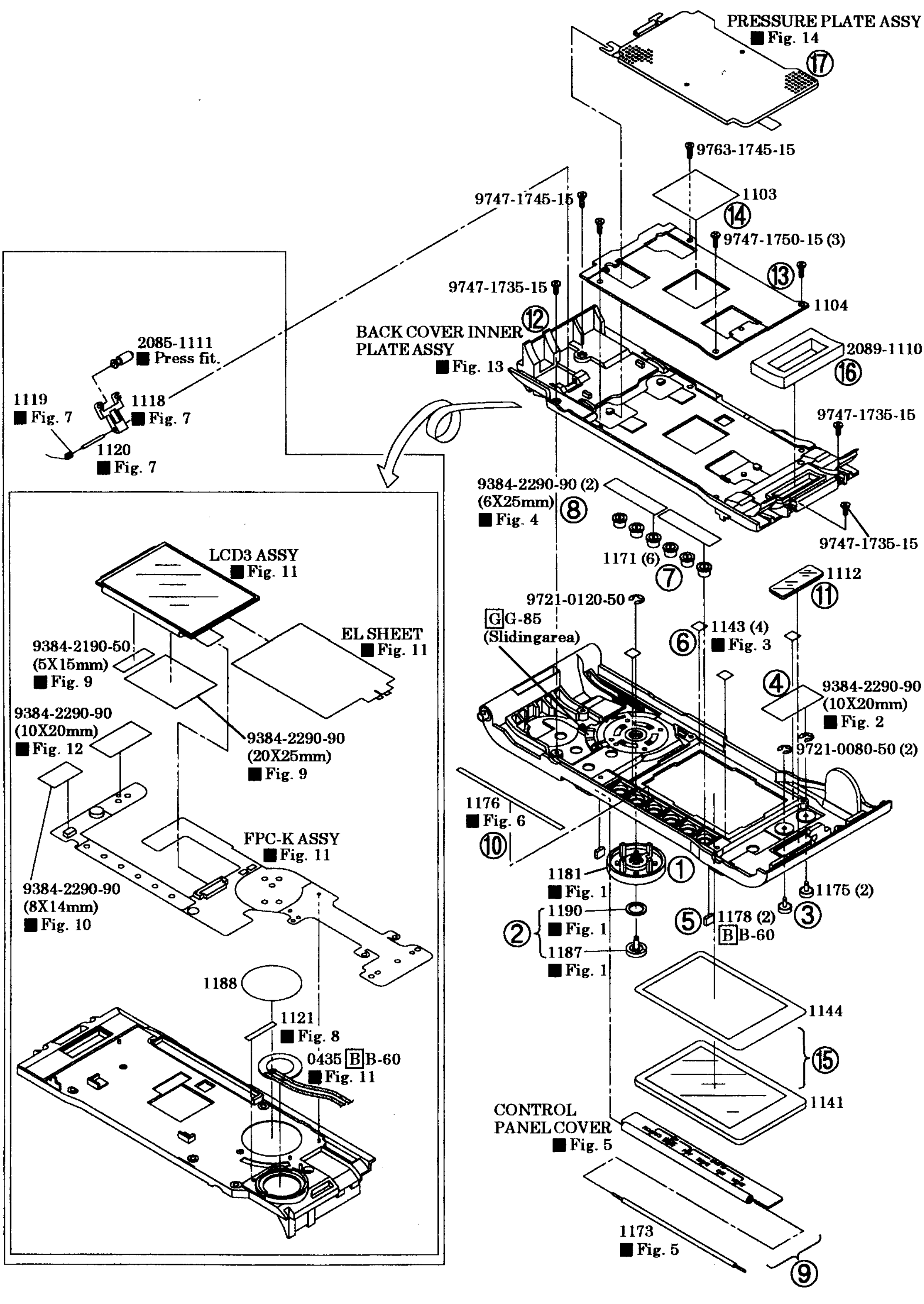
■ Fig. 21

1. Arrange the lead wire of flash, and affix with the polyester tape.
2. Stick the polyester tape to the tip of FPC-H.



■ BACK COVER Assembly

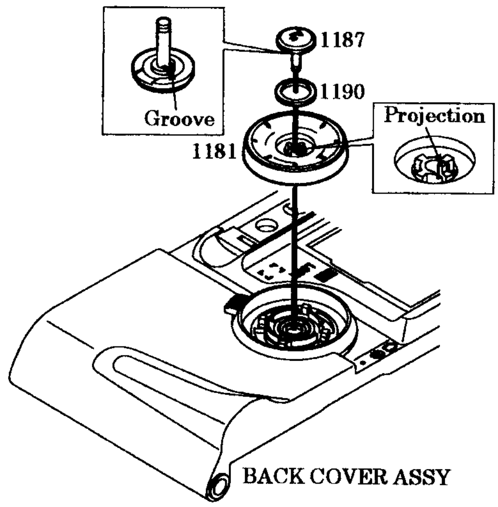
Assemble in numerical order; 1 to 17.



REPAIR GUIDE

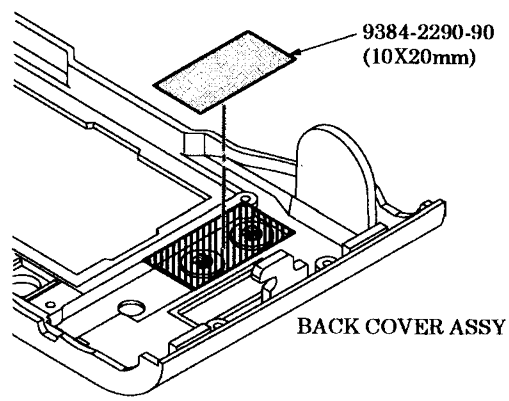
■ Fig. 1

1. Install #1181 so that its projection is upward.
2. Fit #1190 to #1181.
3. Install #1187 fitting its groove to the projection of #1181.



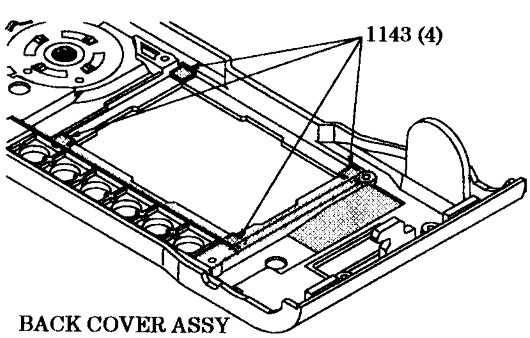
■ Fig. 2

Stick the polyester tape to the shaded area.



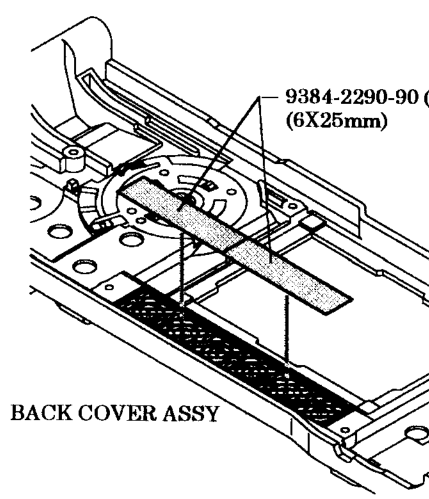
■ Fig. 3

Stick #1143 to the designated positions.



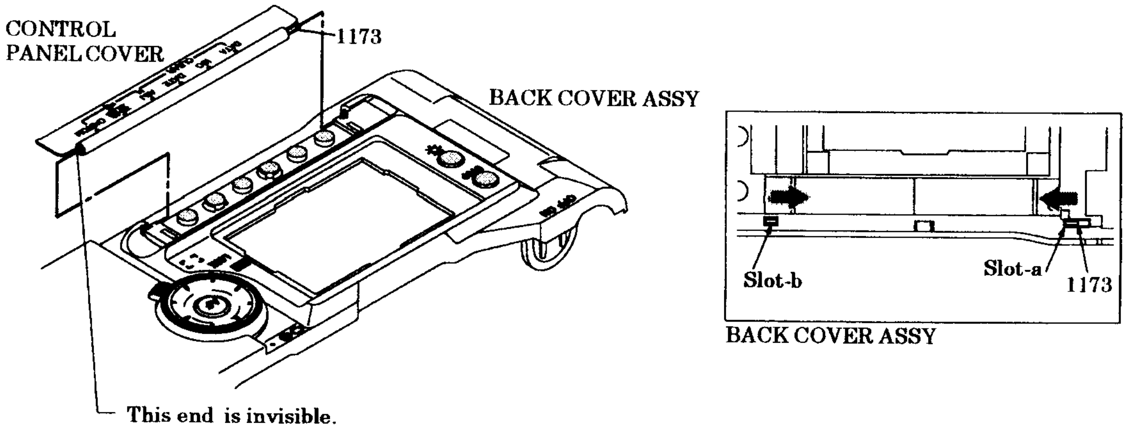
■ Fig. 4

Stick the polyester tape to the shaded area.



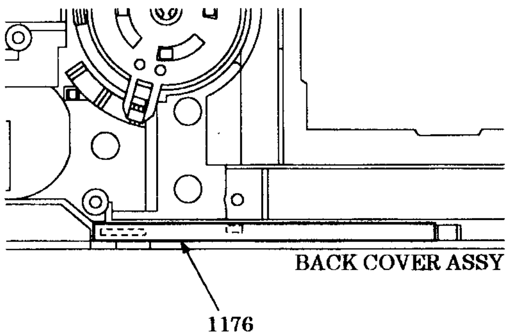
■ Fig. 5

1. Press fit #1173 to CONTROL PANEL COVER.
2. Insert the tip of #1173 to the hinge on the BACK COVER ASSY.
3. Push #1173 from slot-a on the rear side until it stops.
   At removal, push #1173 from slot-b until it stops.



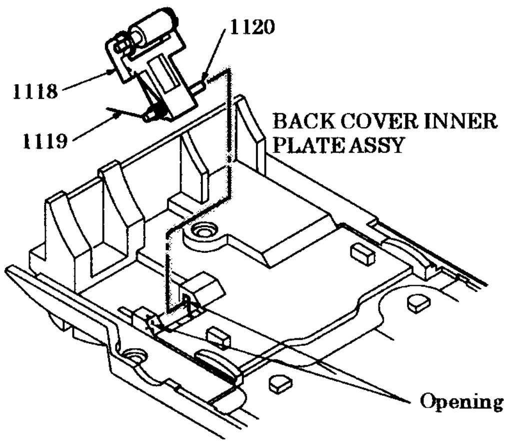
■ Fig. 6

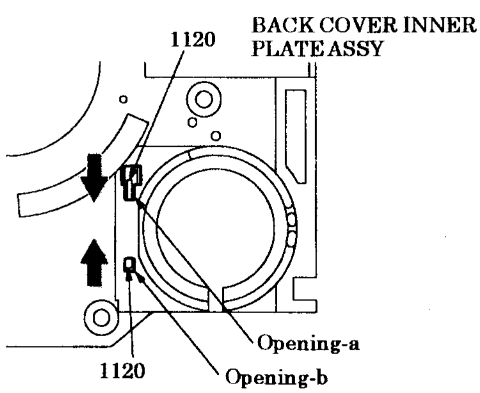
Stick #1176 to the designated position.



■ Fig. 7

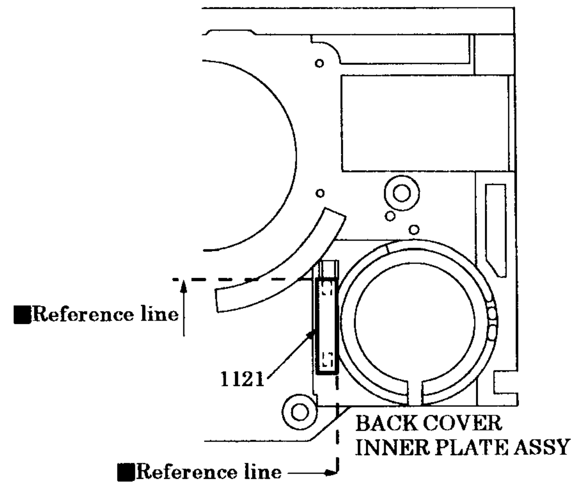
1. Insert #1120 to #1118, then fit #1119 to #1120 as illustrated.
2. Fit tip of #1120 to the openingon BACK COVER INNER PLATE ASSY.
3. Press fit #1120 in the arrow direction through opening-a on the outer side.
   At removal, press #1120 through opening-b.





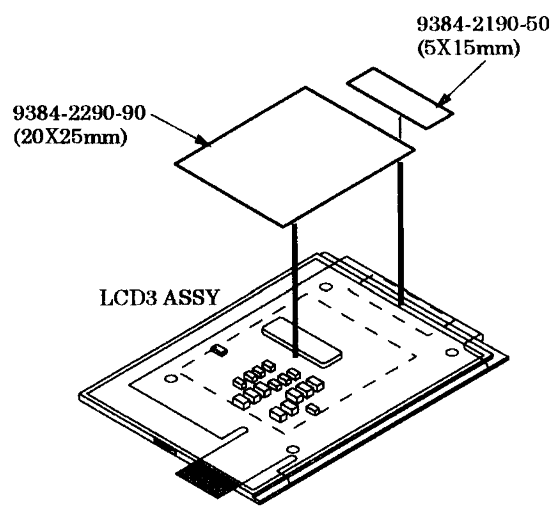
■ Fig. 8

Stick #1121 to the shaded area.



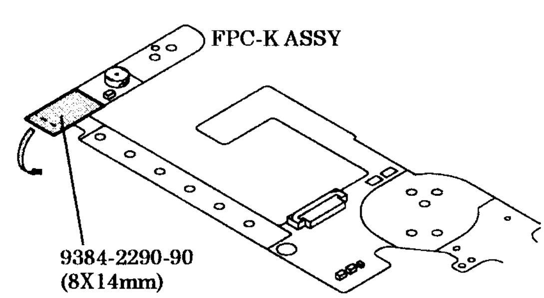
■ Fig. 9

Stick the polyester tape and the double-faced tape to the designated position.



■ Fig. 10

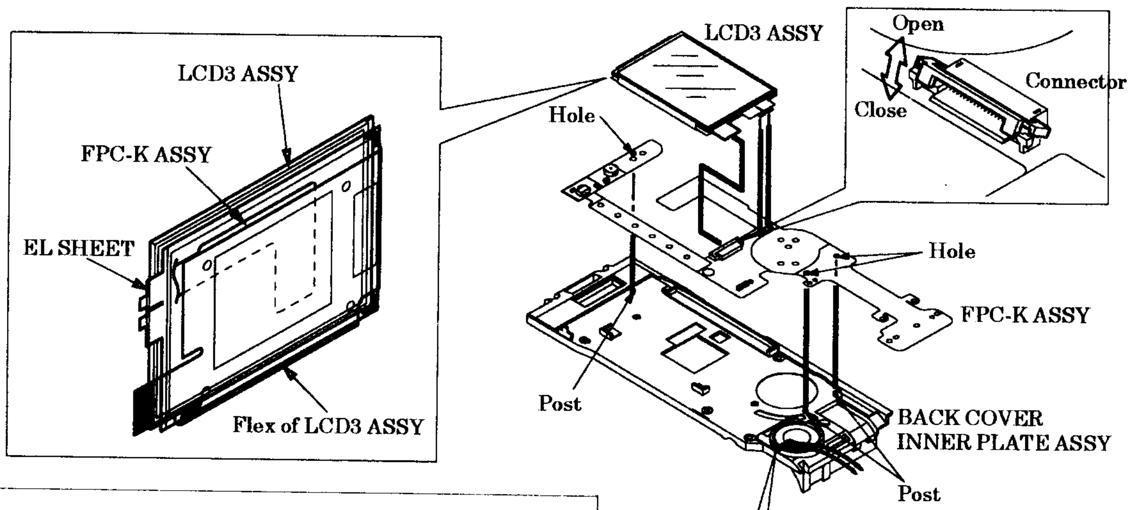
Stick the polyester tape to the designated position.

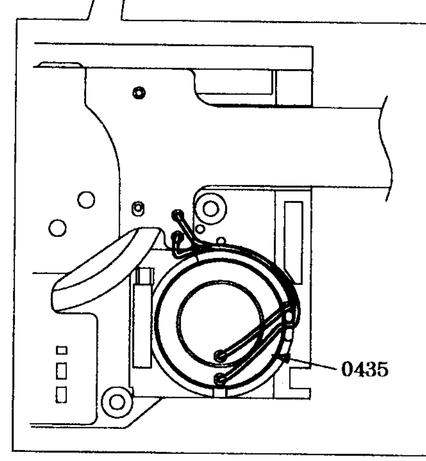


REPAIR GUIDE

■Fig. 11

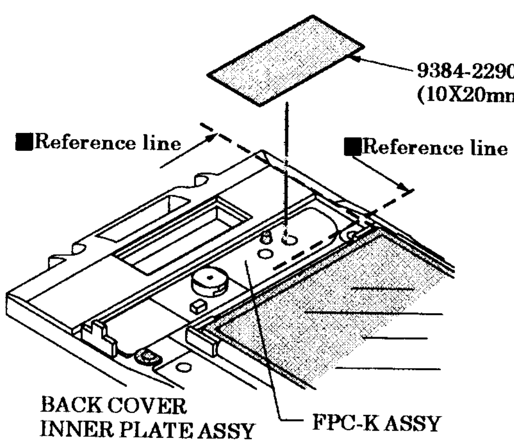
1. Fit FPC-K ASSY to the posts of BACK COVER INNER PLATE ASSY.
2. Put LCD3 ASSY, EL SHEET and FPC-K ASSY in order as illustrated.
3. Arrange and solder EL SHEET and #0435 lead wires. Then inert LCD3 flex to the connector socket.





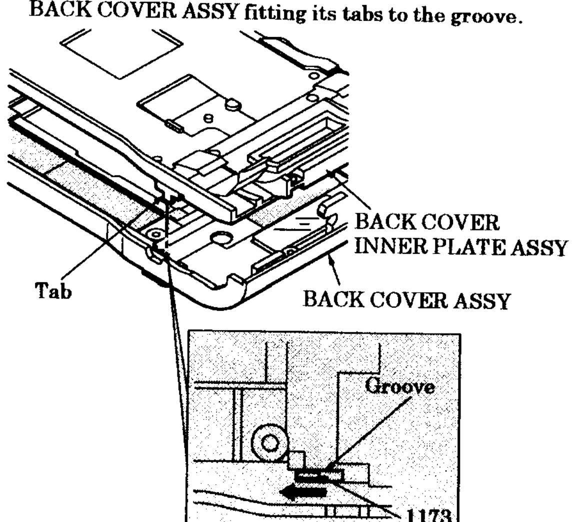
■Fig. 12

Stick the polyester tape to the designated position.



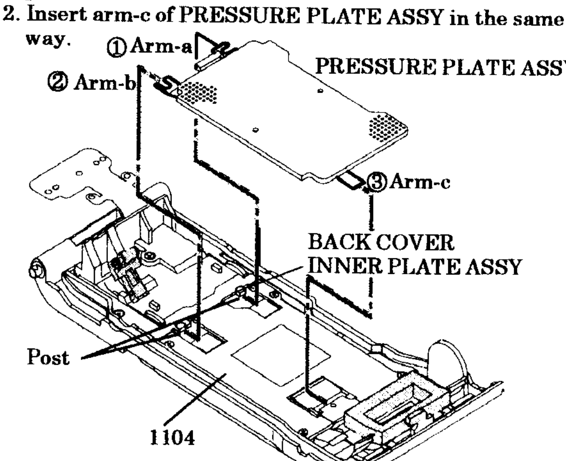
■Fig. 13

1. Press fit #1173 in the arrow direction until it stops.
2. Install BACK COVER INNER PLATE ASSY to BACK COVER ASSY fitting its tabs to the groove.

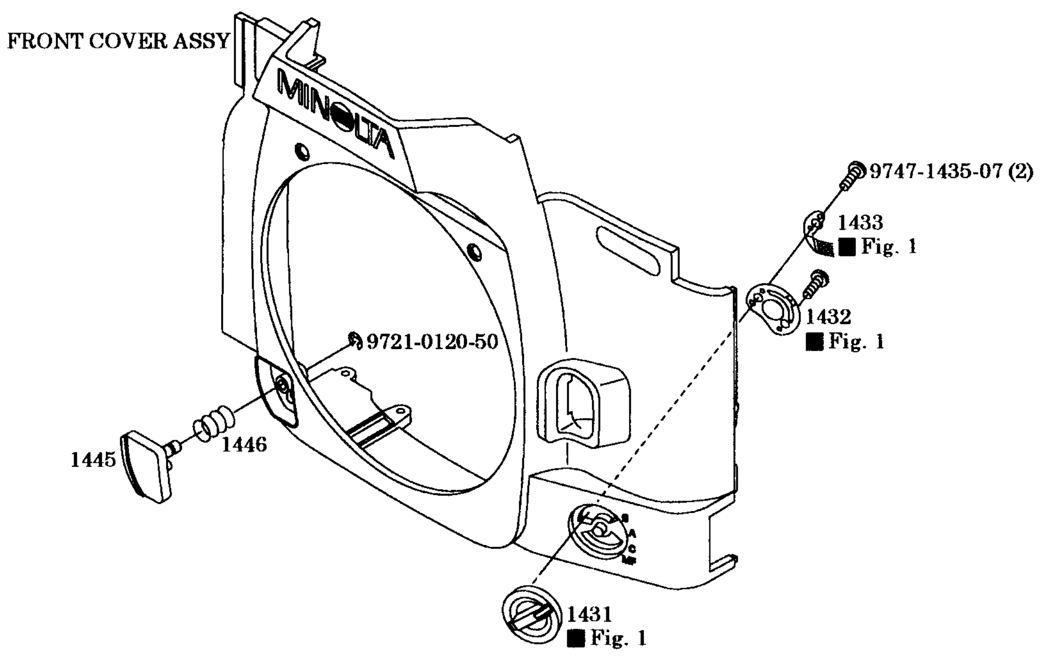


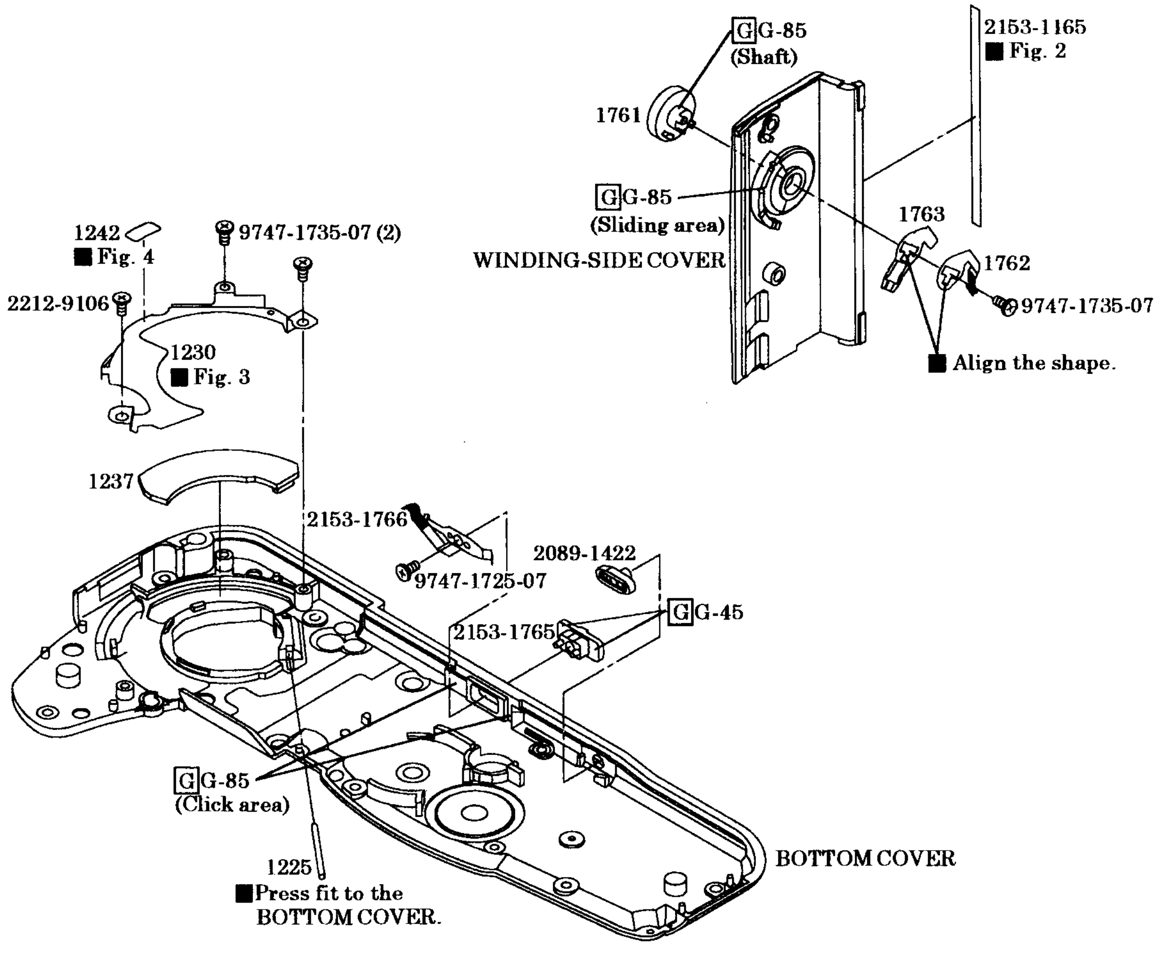
■Fig. 14

1. Insert arm-a and -b of PRESSURE PLATE ASSY between BACK COVER INNER PLATE ASSY and #1104 in alphabetical order so that the arms catch the posts.
2. Insert arm-c of PRESSURE PLATE ASSY in the same way.



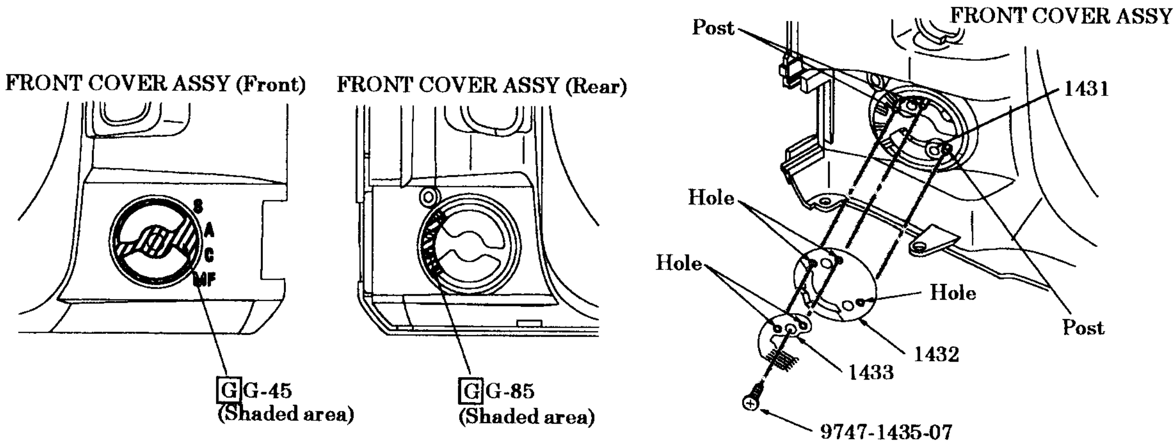
■ FRONT COVER, WINDING-SIDE COVER, BOTTOM COVER Assembly





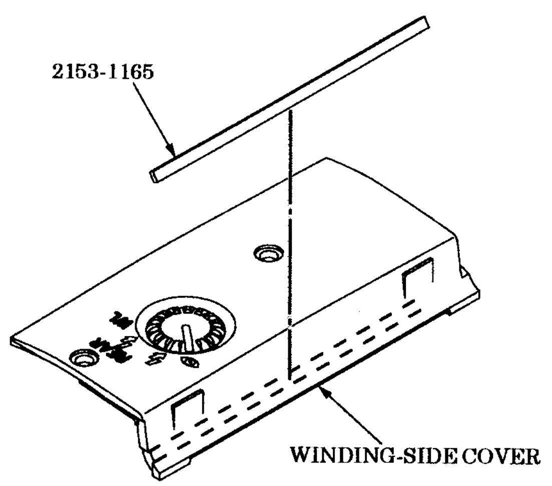
■Fig. 1

1. Apply G-45 and G-85 to the designated points.
2. Install #1431 to FRONT COVER ASSY, then fit #1432 and #1433 to the post of #1431.



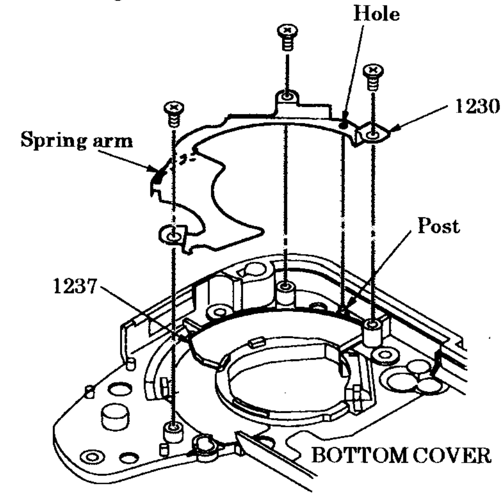
■Fig. 2

Stick #2153-1165 to the designated position.



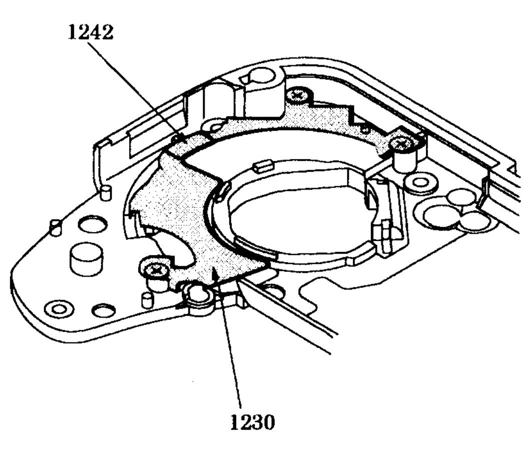
■Fig. 3

Fit #1230 to the posts of BOTTOM COVER to install.
Make sure that the spring arm seats along #1237.
Do not let it go over #1237.

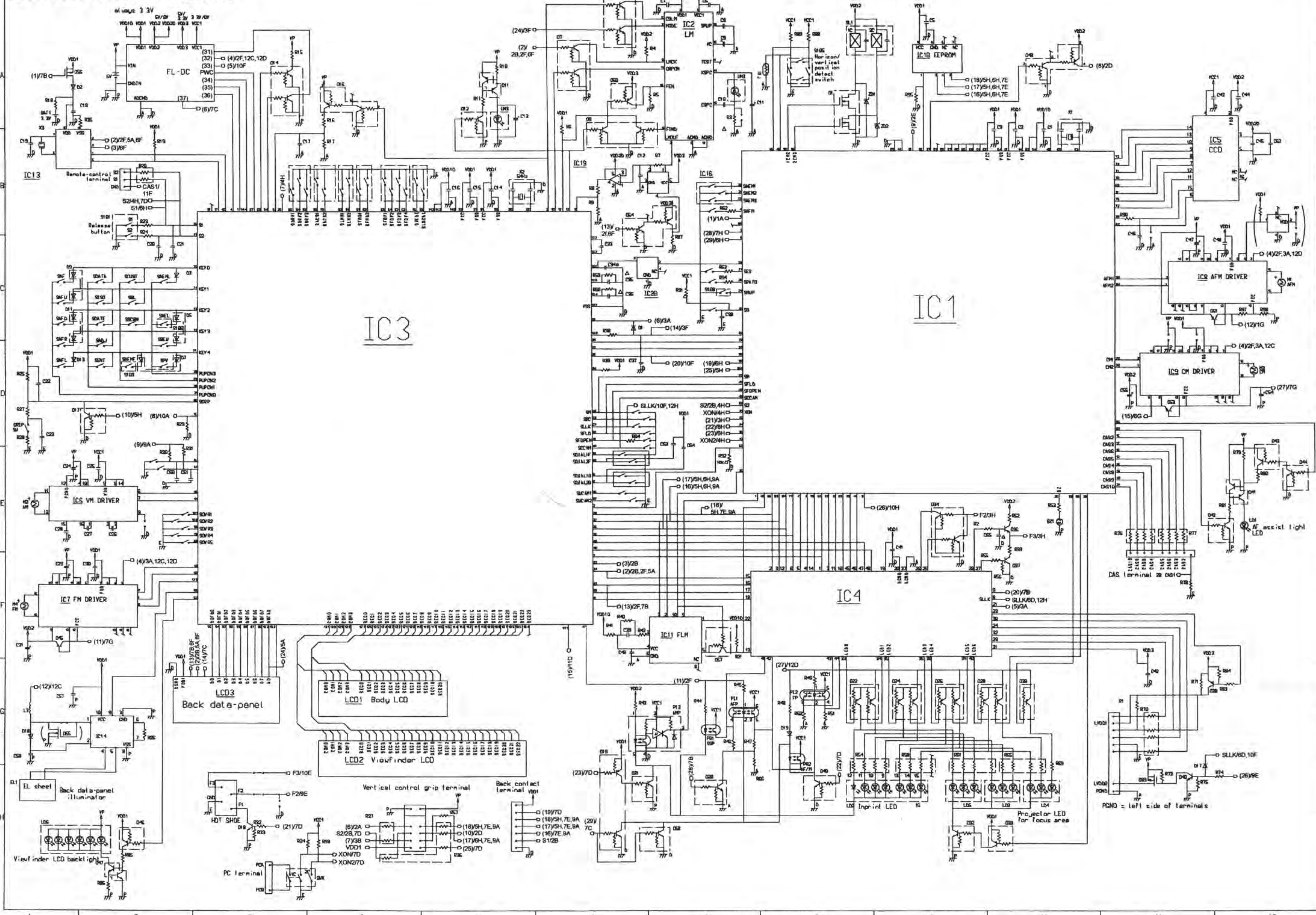


■Fig. 4

Stick #1242 to the designated position.



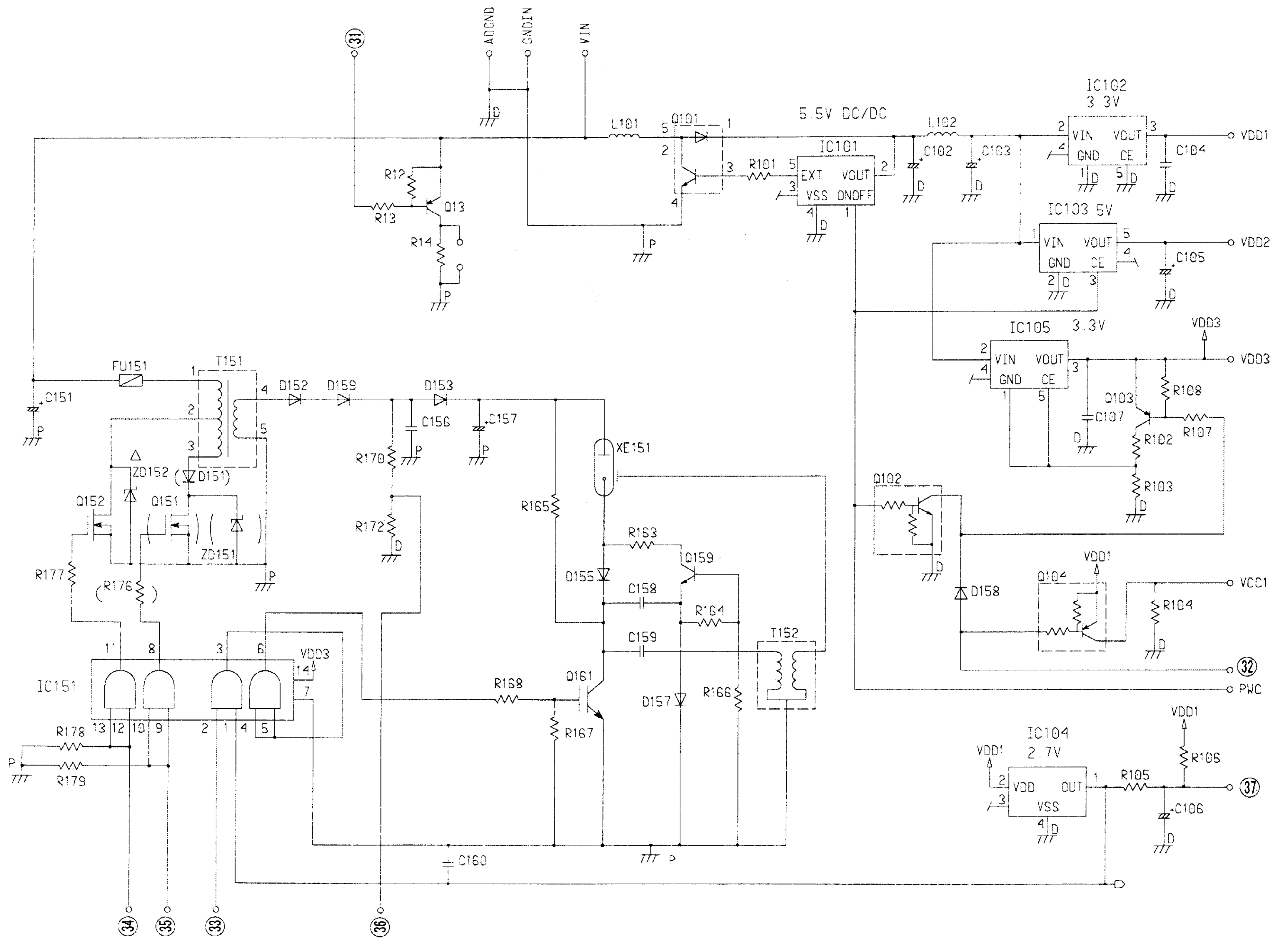
■Circuit Diagram 1/回路図1



20 (2162)A

■Circuit Diagram 1 (FLASH CONVERTER)

■回路図1（フラッシュコンバーター）



CHART

TROUBLESHOOTING CHART

This section consists of the following items.

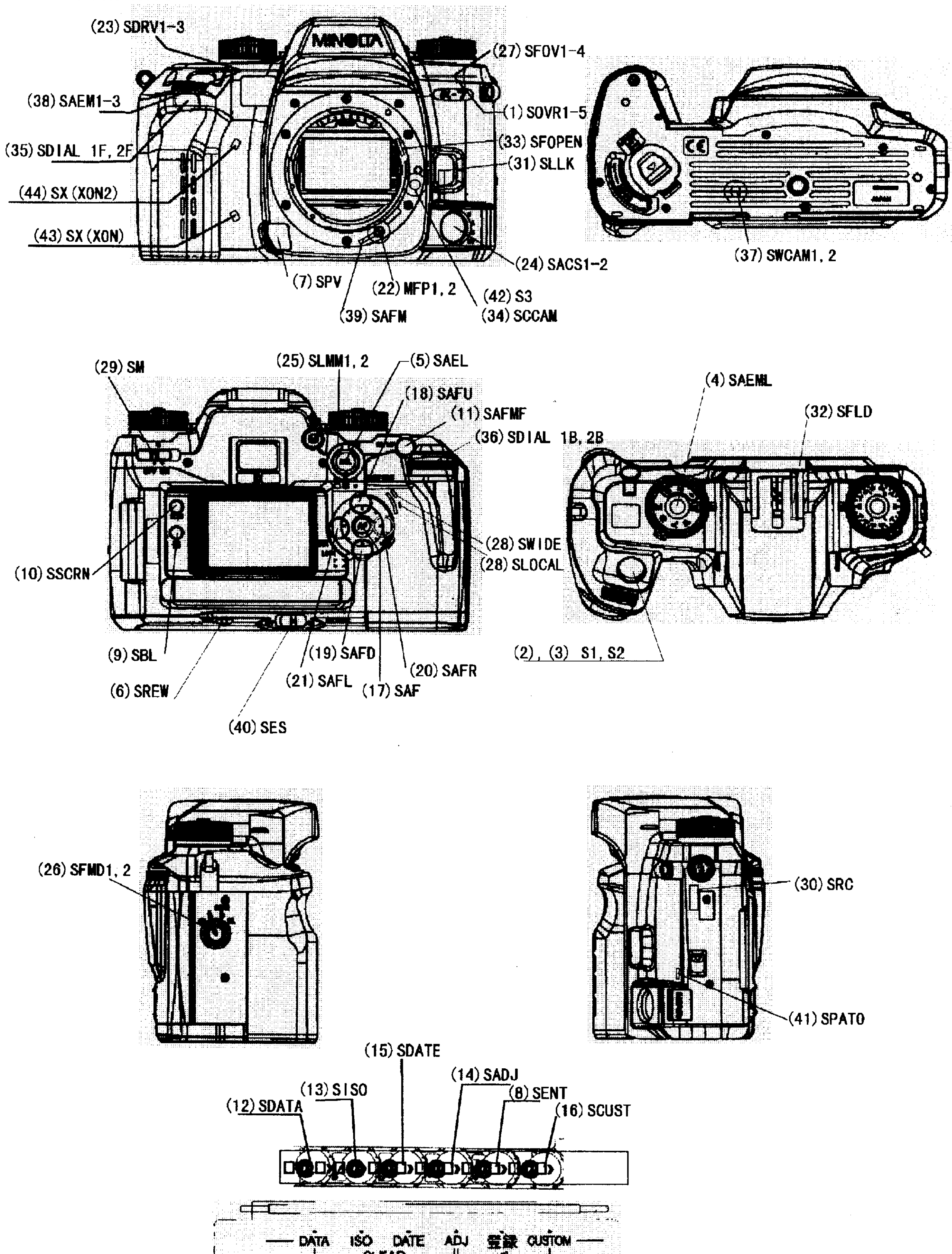
CONTENTS

■Precautions

(1)To check voltage, use digital Multimeter or an apparatus which input impedance of 10M Ω or greater.
(2)To check conductivity, use a circuit tester of 3V or less.
(3)check mainly soldering at lead wires or electrical elements and switch operation, since elements (IC, diode, transistor, resistor, or condenser) seldom cause the trouble.
(4)When checking, do not push elements or pull lead wires strongly.
(5)When checking voltage at patterns where switch operates, be careful not to prevent switch operation or to scratch patterns.
(6)Before removing electrical parts, be sure to disconnect Power Supply.
(7)Before soldering, heat the soldering iron to 290 - 340°C. If higher, solder quickly.
(8)When handling ICs avoid static electricity.
(9)When using DC Power Supply, set the unit to 5.8V/0.6 Ω .

ElectricalSwitches

Name of switches



Switch Function

	Symbol	Description	Function	Operation
1	SOVR 1-5	Exposure compensation	Sets exposure compensation.	By turning Exposure compensation dial
2	S1	AF/AE	Starts AF and AE, and activates data panels.	ON by pressing Shutter-release button partway down
3	S2	Release	Releases the shutter.	ON by pressing shutter-release button all-the-way down
4	SAEML	Exp. Dial lock	Enables exposure mode dial unlock.	ON by pressing Exp. mode dial lock-release button
5	SAEL	AE Lock	Holds metering value.	ON by pressing AE lock button
6	SREW	Rewind	Starts film rewind.	ON by pressing manual-rewind button
7	SPV	Preview	Detects depth-of-field preview setting.	ON by pressing depth-of-field preview button
8	SENT	Enter	Assigns the present setting to Memory1-3.	ON by pressing Enter button
9	SBL	Back-light	Starts navigation display illumination.	ON by pressing Illuminator button
10	SSCRN	Display	Switches display in Navigation screen.	ON by pressing DISP button
11	SAFMF	AF/M	Switches focus mode.	ON by pressing AF/MF control button.
12	SDATA	Data Memory	Enables data memory selection. .	ON by pressing Data-memory button
13	SISO	ISO	Enables film speed selection.	ON by pressing ISO button
14	SADJ	Adjust	Enters the present setting.	ON by pressing Adjust button
15	SDATE	Date	Enables date setting.	ON by pressing Date button.
16	SCUST	Custom	Enables custom function setting.	By turning control dial after pressing Custom button.
17	SAF	AF-center	Selects spot AF area.	ON by pressing Spot AF button
18	SAFU	AF-Up	Selects local focus area.	ON by pressing Focus area selector in Up direction.
19	SAFD	AF-Down	Selects local focus area.	ON by pressing Focus area selector in Down direction
20	SAFR	AF-Right	Selects local focus area.	ON by pressing Focus area selector in Right direction
21	SAFL	AF-Left	Selects local focus area.	ON by pressing Focus area selector in Left direction
22	MFP1,2	DV Encoder	Detects focus lens motion (2-phase distance encoder)	Corresponds to AF coupler operation
23	SDRV1-3	Drive-mode	Selects drive mode; Single, continuous, bracket, self-timer, multiple exposure.	By turning Drive-mode lever
24	SACS1-2	AF-mode	Selects focus mode; AF-S/-A/-C, MF	By turning Focus-mode switch
25	SLMM1,2	Metering-mode	Selects metering mode; 14-segment honeycomb, center-weighted, spot.	By turning Metering-mode switch
26	SFMD1,2	Flash-mode	Selects flash mode; Red-eye reduction, normal, rear flash sync, wireless.	By turning Flash-mode switch

4 A(2162)

	Symbol	Description	Function	Operation
27	SFOV1-4	Flash-compensation	Sets flash compensation.	By turning Flash compensation dial
28	SWIDE, SLOCAL	Wide/local	Selects focus area; Wide, Lock, Local.	By turning Wide/Local focus-area switch
29	SM	Main	Activates/deactivates camera.	By sliding Main switch
30	SRC	Back-cover	Detects back cover status.	ON while the back cover is open
31	SLLK	Lens Lock	Detects lens existence.	OFF while the lens is being attached/detached
32	SFLD	Flash Down	Detects built-in flash position.	ON while the flash is up
33	SFOPEN	Open Aperture	Detects aperture ring position.	ON when aperture is reset
34	SCCAM	Mirror Charge	Detects mirror charge completion.	ON at mechanical charge completion.
35	SDIAL1F, 2F	Front Dial	Sets the present selection.	By turning Front control dial
36	SDIAL1B, 2B	Rear Dial	Sets the present selection.	By turning Rear Control dial
37	SWCAM1,2	Transport Changeover.	Detects winding cam position. *Film chamber lock status	Hi Lo Rew Unlock* SW1 L H H L SW2 H H L L
38	SAEM1-3	Exposure Dial	Selects exposure mode; M/S/A/P, Full-auto, Memory 1-3	By turning Exposure mode dial
39	SAFM	AF Coupler	Detects AF coupler status.	OFF while AF and normal MF, ON while AF coupler is disconnected (Reverse MF)
40	SES	Eye-start	Sets/cancels eye-start.	By sliding Eye-start switch
41	SPATO	Cartridge	Detects film existence.	OFF with film loaded.
42	S3	Charge completion	Detects shutter charge completion.	ON at shutter charge completion
43	SX (XON)	Sync.	Triggers flash to fire.	ON when 1C traverse completes, OFF when frame advance completes.
44	SX (SXON2)	2C	Detects 2C traverse.	ON when 2C traverse completes, OFF when frame advance completes.

Trouble code

Check-1 Instant Readout

Press and hold the shutter-release button and the rewind button simultaneously while error is indicated.

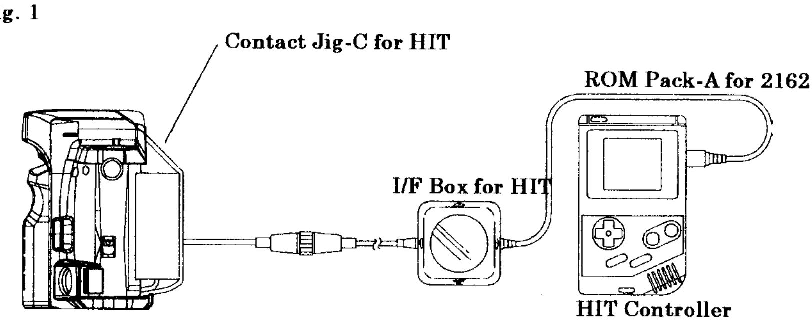
Equipment required for Check-2

HIT Controller
I/F Box for sHIT
ROM Pack-A for 2162
Contact Jig-C for HIT

Check-2 Using HIT

1.Set up the equipment as in Fig. 1.
2.Select "TROUBLE CODE" from ASSIST MODE menu and press SELECT Button.
3.Press the shutter-release button partway down (S1 ON). Trouble codes appear.
To erase the codes in memory, select "CLEAR" and press SELECT Button.Then press the shutter-release button partway down.
4.Select "MENU" and press SELECT Button to return to the ASSIST MODE menu.

■ Fig. 1



6 A(2162)

Trouble Code List

The error indication differs depending on the battery condition for some items.

Code	Condition	Major Cause	Camera Operation	Error Indication	
				Enough	Low-battery
01	CCD initialization output is not detected within 80microS.	Defective CCD Insufficient contact between FPC-A & -B.	Completes CCD initialization, then records trouble cord.	Blank	Blank
02	Metering IC (IC2) output (LMOUT) is beyond range of 2.3-2.6V.	Defective IC-2 Insufficient contact between FPC-A & -B. Defective IC-19	Records trouble code.	Blank	Blank
20	During film rewind, the first pulse from PR1 is not detected until PI3 pulse counts up to 6000.	Film tear-off Rewind gear operation failure	Records trouble code when detecting a second time.	Blank	Blinking low-battery indicator
21	PI3 pulse count is less than 5 per every 50ms during film rewind, repeatedly for 20 cycles.	Film jamming	Records trouble code when detecting a second time.	Blank	Blinking low-battery indicator
30	Built-in flash charge does not complete within 30s.	Battery exhausted. Problem in flash circuit.	Blinks low-battery indicator.	Blinking low-battery indicator	Blinking low-battery indicator
50	S3 does not turn off within 150ms after M3 normal drive started.		Brakes M3 for 50ms, then records trouble code.	ERROR	ERROR
52	PI2 output is less by 32 pulse until aperture stabilization. (Skipped when 5B/5E is detected in advance.)	Aperture operation failure.	Records trouble code when detecting sequentially twice.	ERROR	ERROR
53	SCCAM does not turn on within 2s after M3 normal drive started.	Mirror/Shutter charge failure	Brakes M3 for 50ms, then records trouble code.	Blank	Blinking low-battery indicator
54	S3 does not turn on within 2s after M3 normal drive started.	Mirror/Shutter charge failure	Brakes M3 for 50ms, then records trouble code.	Blank	Blinking low-battery indicator
55	After winding cam switchover, PI3 pulse count after M2 brake start exceeds the requirement.	Winding Cam overrun	Records trouble code when detecting a second time.	Blank	Blinking low-battery indicator
56	Shutter is not set; SX (XON/XON2) is ON at S2 ON.	Shutter charge failure	Records trouble code when detecting twice within a roll. (Not detected if SRC is ON.)	Blank	Blinking low-battery indicator
57	Shutter is not set; SX (XON/XON2) is ON before 1C/2C (Front/Rear) run.	Shutter charge failure	Records trouble code when detecting sequentially twice. (Not detected if SRC is ON.)	ERROR	ERROR
58	SX (XON/XON2) ON is not detected between 1CMg separation until C2 traverse completion.	Shutter traverse failure SX contact failure	Records trouble code when detecting sequentially twice.	ERROR	ERROR
59	With 1/500 or slower SS, XON turns OFF before XON2 turns ON.	1C bounced and jammed.	Records trouble code when detecting sequentially twice.	ERROR	ERROR

Code	Condition	Major Cause	Camera Operation	Error Indication	
				Enough	Low battery
5A	At aperture ring reset, SFOPEN does not turn ON within 2s.	Aperture unit operation failure	Brakes M4 for 50ms, then records trouble code.	Blank	Blinking low-battery indicator
5B	At aperture stop-down, PI2 pulse count is less than requirement within 130ms	Diaphragm operation failure Defective PI2	Records trouble code when detecting sequentially twice.	ERROR	ERROR
5E	At aperture stop-down, PI2 pulse count is not detected.	Diaphragm operation failure Defective PI2	Records trouble code when detecting sequentially twice.	ERROR	ERROR
5F	At aperture initial reset (3EV stop down), SFOPEN remains ON	Defective SFOPEN	Records trouble code when detecting sequentially twice.	ERROR	ERROR
62	XON2 is ON within 2.5ms after 2CMg separation signal.	No slit shutter	Records trouble code when detecting twice within a roll.	ERROR	ERROR
	SWCAM is not set correctly (no change/incorrect position) within 500ms after M2 brake following film advance.	Winding cam operation failure Defective SWCAM1/2	Brakes M2 for 50ms, then records trouble code.	Blank	Blinking low-battery indicator
70	Rewind position (SCAM1=H, SCAM2=L) is not set.				
71	Rewind position (SCAM1=H, SCAM2=L) is unchanged.				
72	Advance (L) position (SCAM1=H, SCAM2=H) is not set.				
73	Advance (L) position (SCAM1=H, SCAM2=H) is unchanged.				
74	Advance (H) position (SCAM1=L, SCAM2=H) is not set.				
75	Advance (H) position (SCAM1=L, SCAM2=H) is unchanged.				
76	Film chamber lock position (SCAM1=L, SCAM2=L) is not set.				
77	Film chamber lock position (SCAM1=L, SCAM2=L) is unchanged.				
78	Change in PI3 pulse is 1 pulse or less between motor start and brake signals.				
79	After braking M2 to complete cam switchover, SWCAM is then found off-position repeatedly.				
B0	Focus mode does not switchover within 300ms after SAFMF ON.	Defective PR2 Clutch operation failure	Records trouble code when detecting a second time.	None	None

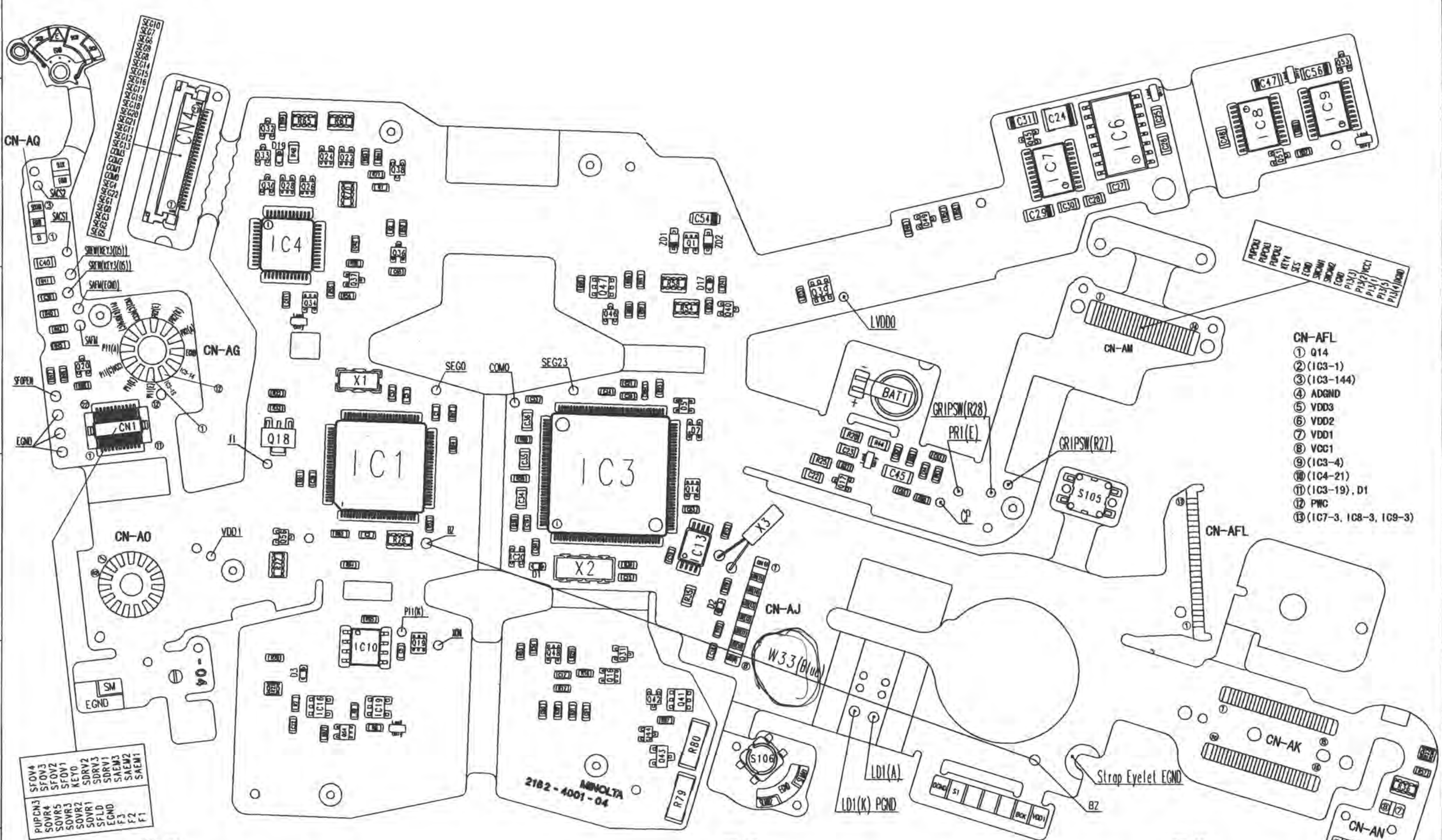
Map of electrical elements

Electrical Elements list

Symbol in the location column represents the position of the element in the map for FPC-A Assy.

Element	Location	Element	Location	Element	Location	Element	Location
C001	C3	D001	D4	Q049	B6	R057	E8
C002	D3	D002	D5	Q051	B8	R058	C4
C003	C3	D003	E2	Q053	A8	R059	D4
C005	E3	D005	C4	Q054	E3	R060	C4
C012	E2	D007	C5	Q056	D2	R061	B3
C014	C4	D017	C5			R062	D3
C015	D4	D019	B2	R001	B3	R063	C6
C016	D4			R002	B3	R064	C3
C017	E4	IC001	C3	R007	E2	R065	B2
C018	E5	IC003	D4	R008	E3	R066	C1
C019	D4	IC004	B2	R009	E3	R069	B2
C020	C4	IC006	B7	R015	D5	R070	B3
C021	C4	IC007	B6	R016	E4	R071	B3
C022	D5	IC008	B8	R017	E4	R073	C5
C023	C5	IC009	B8	R018	D5	R074	C5
C024	B6	IC010	D3	R019	D5	R075	C5
C025	B7	IC013	D4	R020	E2	R076	D3
C026	B7	IC016	E2	R023	C4	R077	D2
C027	B7	IC019	E3	R024	C4	R078	E2
C028	B7	IC020	D4	R025	D5	R079	E4
C029	B6			R027	D5	R080	E4
C030	B6	Q001	B4	R028	C5	R081	E4
C031	B6	Q014	D4	R029	E4	R083	B3
C033	C4	Q016	E4	R030	E4	R084	B3
C034	D4	Q017	D5	R031	E4	R085	C4
C035	D4	Q018	C2	R032	C2	R086	C4
C036	C4	Q019	D3	R033	C2	R087	E3
C037	C3	Q020	C1	R034	D4	R088	C4
C038	D2	Q022	B3	R035	D4	R089	C4
C039	C1	Q024	B3	R036	E8	R090	D6
C040	B1	Q026	B2	R037	E8	R091	D2
C041	C2	Q028	B2	R038	D4	R092	C3
C042	B3	Q030	B2	R039	D4	R093	E4
C043	D6	Q031	E4	R040	C1	R094	D3
C044	D6	Q032	B2	R041	C1	R095	D3
C045	D6	Q033	B2	R042	C1	R097	B8
C046	D6	Q034	C2	R043	D6	R098	B8
C047	A8	Q036	B3	R044	C5	R099	B3
C048	B7	Q037	C3	R045	C1		
C054	B5	Q038	B3	R046	C1	S105	D7
C056	A8	Q039	C5	R047	C1	S106	E5
C060	E4	Q040	C5	R048	B2		
C061	E4	Q041	E4	R049	B6	Th1	C4
C062	C6	Q042	E4	R050	B6		
C063	D4	Q043	E4	R051	B6	X001	C3
C064	D4	Q044	E4	R052	B3	X002	D4
C065	B3	Q045	B6	R053	C3	X003	D5
		Q046	C4	R054	C4		
CN001	C1	Q047	C4	R055	C3	ZD001	B4
CN004	B2	Q048	E4	R056	C3	ZD002	B5

■FPC-A ASSY (0401)
■Aフレキセット (0401)



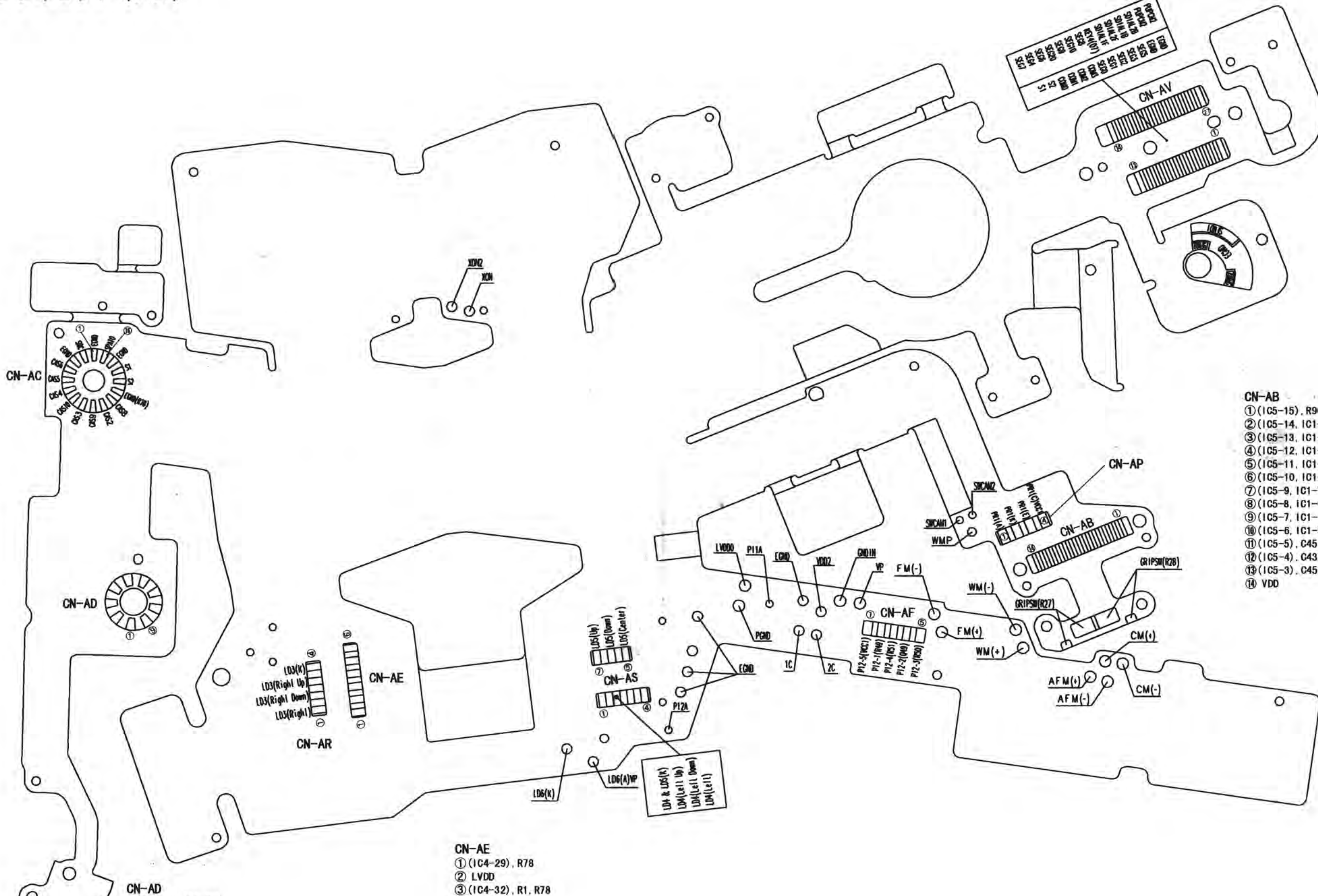
CN-AFL
① Q14
②(IC3-1)
③(IC3-144)
④ ADGND
⑤ VDD3
⑥ VDD2
⑦ VDD1
⑧ VCC1
⑨(IC3-4)
⑩(IC4-21)
⑪(IC3-19), D1
⑫ PWC
⑬(IC7-3, IC8-3, IC9-3)

CN-AO
①(IC2-6), Q5
② DOTA0
③(IC13-2, IC3-34, IC4-15)
④(IC2-11, IC3-18)
⑤ VDD2
⑥ VDD1
⑦ DGND
⑧(IC3-13), Q9, Q12
⑨ VDD2D
⑩(IC2-9, IC3-12), Q9, R5
⑪ VDD20
⑫ AGND
⑬ VP
⑭ PGND
⑮(IC2-3, IC3-6, IC16-1), R7, R8, R9

CN-AK
① DOTD6
② DOTD5
③ DOTD4
④ DOTD3
⑤ L3, R97, Q51 (C)
⑥ PGND
⑦ KEY2
⑧ SWIDE
⑨ KEY4
⑩ KEY3
⑪ DGND
⑫ VDD1
⑬ DOTD7
⑭ KEY0
⑮ EGND
⑯ PUPCN2
⑰ BZ
⑱(IC3-138)
⑲(IC13-2, IC3-34), Q7
⑳(IC3-32), Q54
㉑ KEY1
㉒(IC3-102)
㉓ DOTA0
㉔ SLOCAL
㉕(IC3-55, IC14-9)
㉖ DOTD2
㉗ DOTD1
㉘ DOTD0
㉙ PUPCN1
㉚ PUPCN0

CN-AN
①(IC3-19, FL-DCP), D1, R37
② S2
③(IC3-25), R37
④ VDD1
⑤(IC1-100), R36
⑥(Back contact4, IC1-84IC3-36, IC4-12, IC10-4)
⑦ Q17
⑧(Back contact3, IC1-85 IC3-2, IC4-38, IC11-2)

■FPC-A ASSY (0401)
■Aフレキセット (0401)



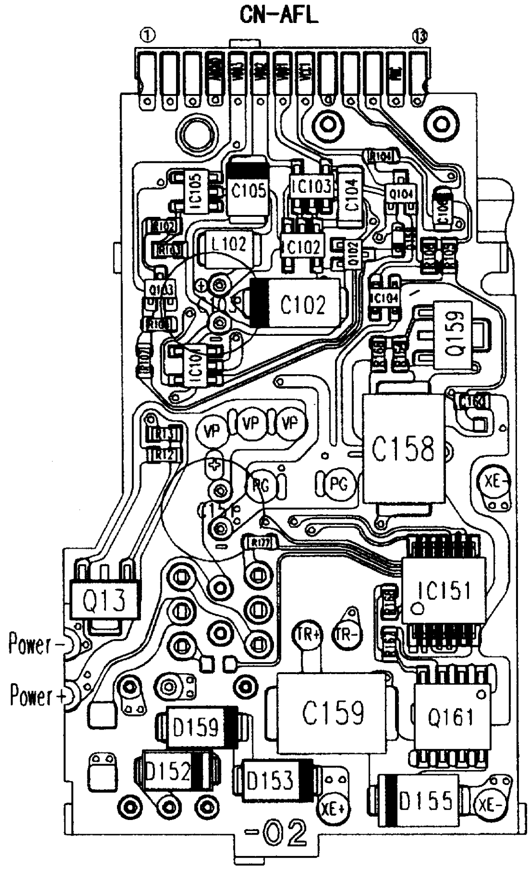
CN-AB
①(IC5-15), R90
②(IC5-14, IC1-73)
③(IC5-13, IC1-74)
④(IC5-12, IC1-75)
⑤(IC5-11, IC1-72)
⑥(IC5-10, IC1-71)
⑦(IC5-9, IC1-70)
⑧(IC5-8, IC1-69)
⑨(IC5-7, IC1-11)
⑩(IC5-6, IC1-52)
⑪(IC5-5), C45
⑫(IC5-4), C43
⑬(IC5-3), C45
⑭ VDD

CN-AE
①(IC4-29), R78
② LVDD
③(IC4-32), R1, R78
④(IC4-24), R78
⑤ DGND
⑥(IC4-30), R78

CN-AD
①(IC11-1, IC4-22)
②(IC11-2, IC1-85, IC3-38, IC4-2)
③(IC11-3), R42
④ VCC
⑤(IC11-5), Q57
⑥ AGND
⑦(IC11-7, IC1-83, IC3-37, IC4-3)
⑧(IC11-9, IC1-1)
⑨(IC11-10, IC1-36), Q57

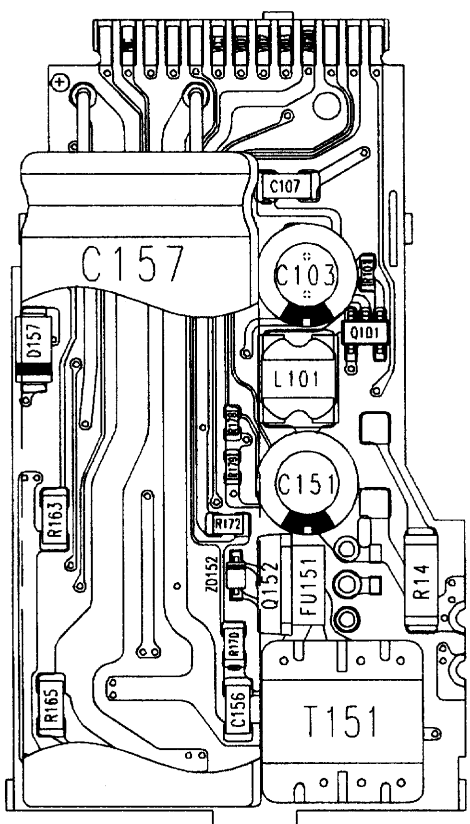
■FLASH CONVERTER PCB ASSY (0441)
■フラッシュコンバーター基板セット (0441)

Front Pattern



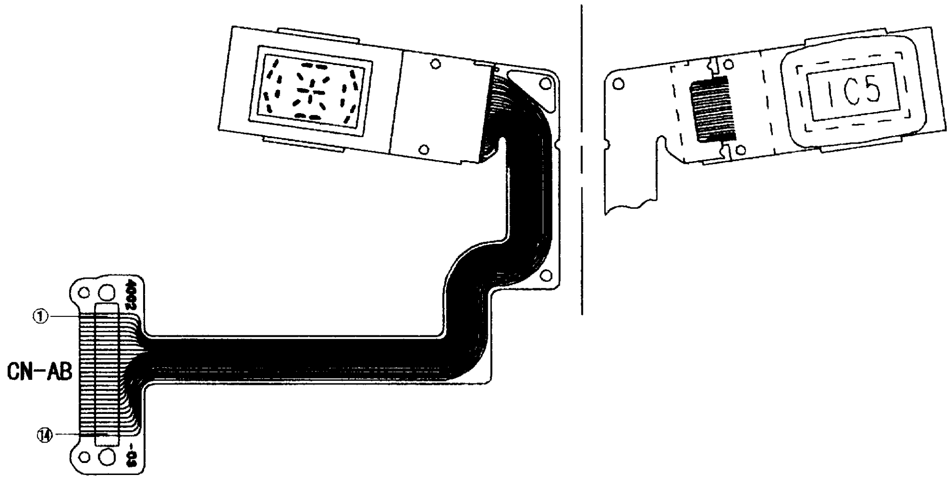
CN-AFL
① Q14
②(IC3-1)
③(IC3-144)
④ ADGND
⑤ VDD3
⑥ VDD2
⑦ VDD1
⑧ VCC1
⑨(IC3-4)
⑩(IC4-21)
⑪(IC3-19), D1
⑫ PWC
⑬(IC7-3, IC8-3, IC9-3)

Back Pattern



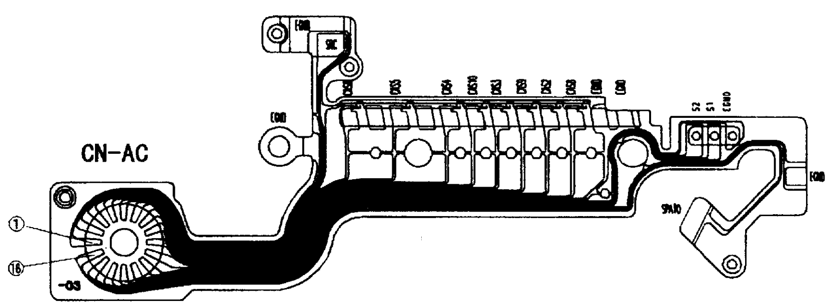
■FPC-B ASSY (0402)
■Bフレキセット (0402)

CN-AB
①(IC5-15), R90
②(IC5-14, IC1-73)
③(IC5-13, IC1-74)
④(IC5-12, IC1-75)
⑤(IC5-11, IC1-72)
⑥(IC5-10, IC1-71)
⑦(IC5-9, IC1-70)
⑧(IC5-8, IC1-69)
⑨(IC5-7, IC1-11)
⑩(IC5-6, IC1-52)
⑪(IC5-5), C45
⑫(IC5-4), C43
⑬(IC5-3), C45
⑭ VDD



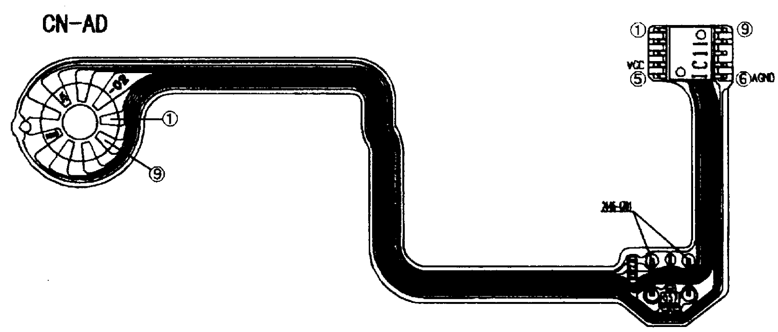
■FPC-C (4003)
■Cフレキ (4003)

CN-AC
① EGND
② SRC
③ EGND
④ CAS6
⑤ CAS5
⑥ CAS4
⑦ CAS10
⑧ CAS3
⑨ CAS9
⑩ CAS2
⑪ CAS8
⑫ EGND(R78)
⑬ S2
⑭ S1
⑮ EGND
⑯ SPATO

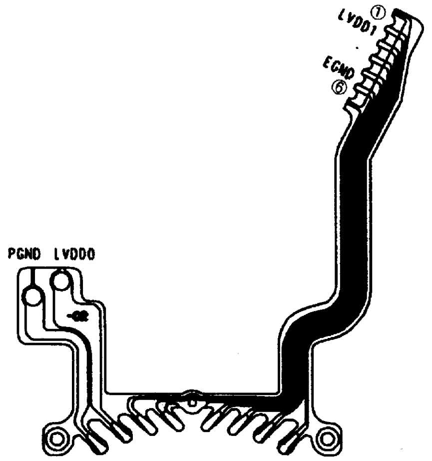


■SPC2 HOLDER ASSY (0556)
■SPC2ホルダーセット (0556)

CN-AD
①(IC11-1, IC4-22)
②(IC11-2, IC1-85, IC3-38, IC4-2)
③(IC11-3), R42
④ VCC
⑤(IC11-5), Q57
⑥ AGND
⑦(IC11-7, IC1-83, IC3-37, IC4-3)
⑧(IC11-9, IC1-1)
⑨(IC11-10, IC1-36), Q57

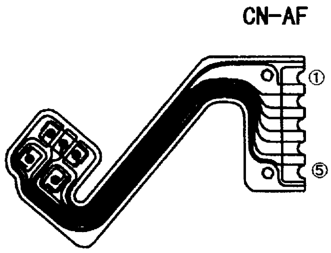


■BL CONTACT HOLDER ASSY (0150)
■BL接片ホルダーセット (0150)



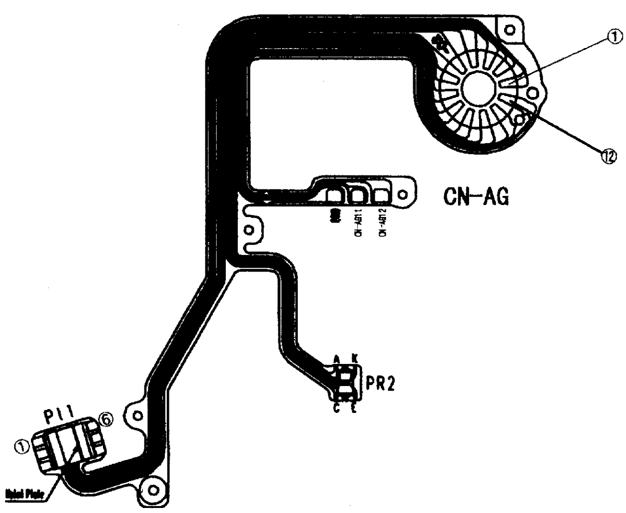
CN-AE
①(IC4-29), R78
② LVDD
③(IC4-32), R1, R78
④(IC4-24), R78
⑤ DGND
⑥(IC4-30), R78

■APERTURE BASE PLATE ASSY (0250)
■絞り台版セット (0250)



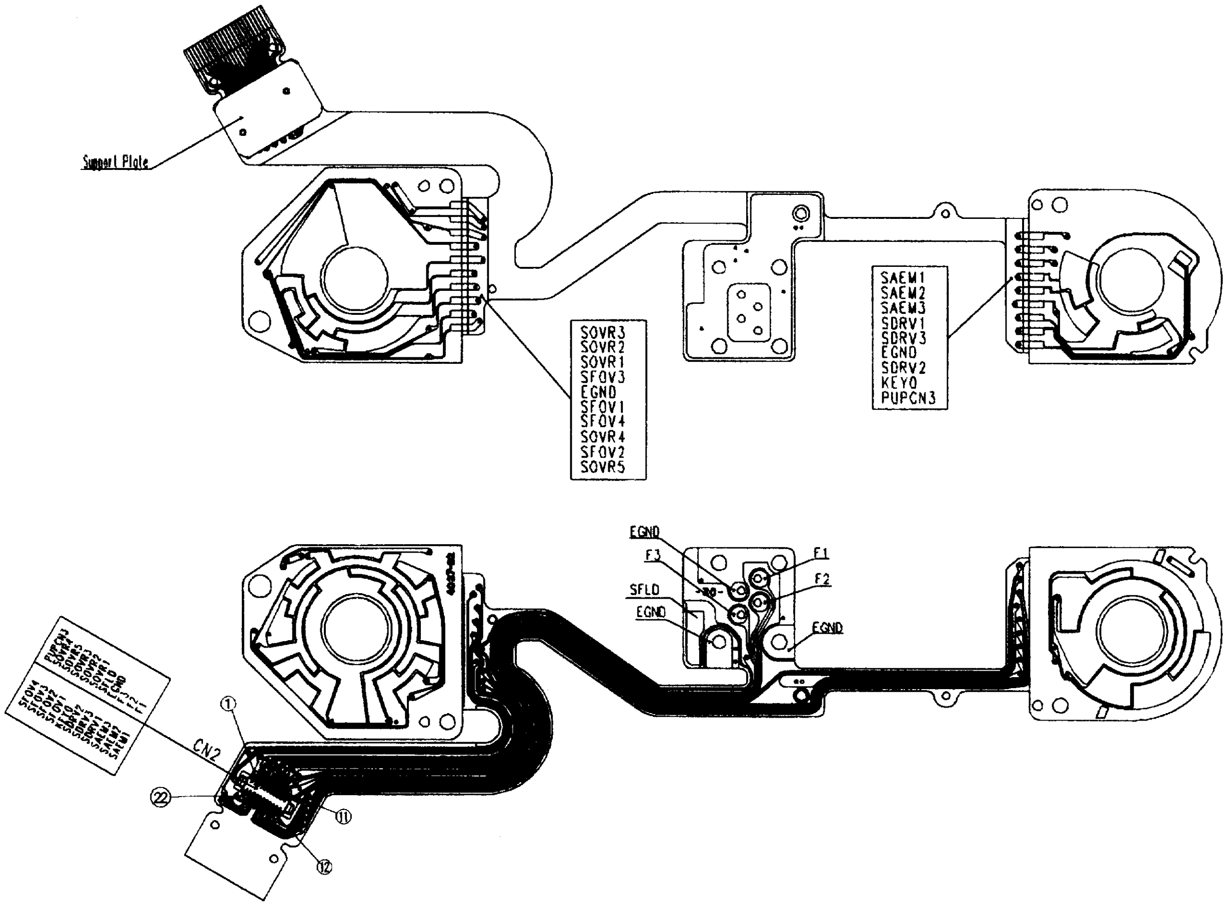
CN-AF
①P12-5 (VCC)
②P12-1 (R49)
③P12-4 (R51)
④P12-2
⑤P12-3 (R50)

■AF/CHARGE BASE PLATE ASSY (0521)
■AF/チャージ台板セット (0521)

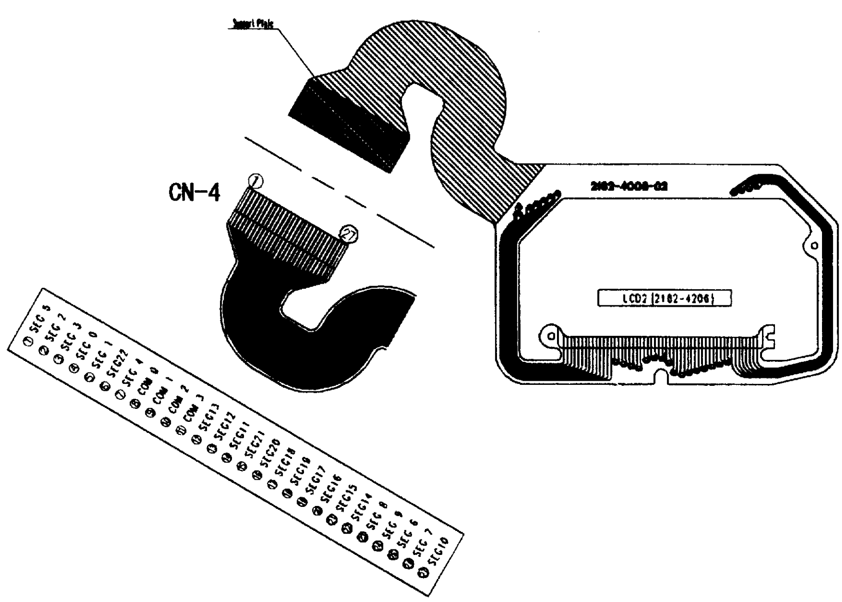


CN-AG
①P11 (E)
②P11 (E)
③P11 (C)
④P11 (A)
⑤P11 (K)
⑥PR2 (C)
⑦PR2 (E)
⑧PR2 (K)
⑨PR2 (A)
⑩EGND
⑪IC3-14
⑫IC3-15

■FPC-H ASSY (0448)
■Hフレキセット (0448)

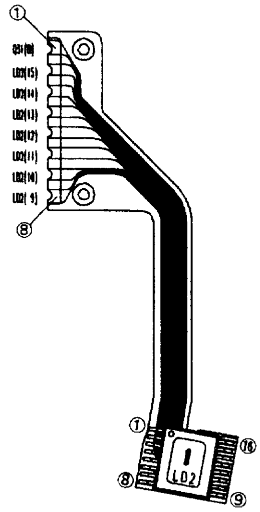


■LCD2 HOLDER ASSY (0503)
■LCD2ホルダーセット (0503)

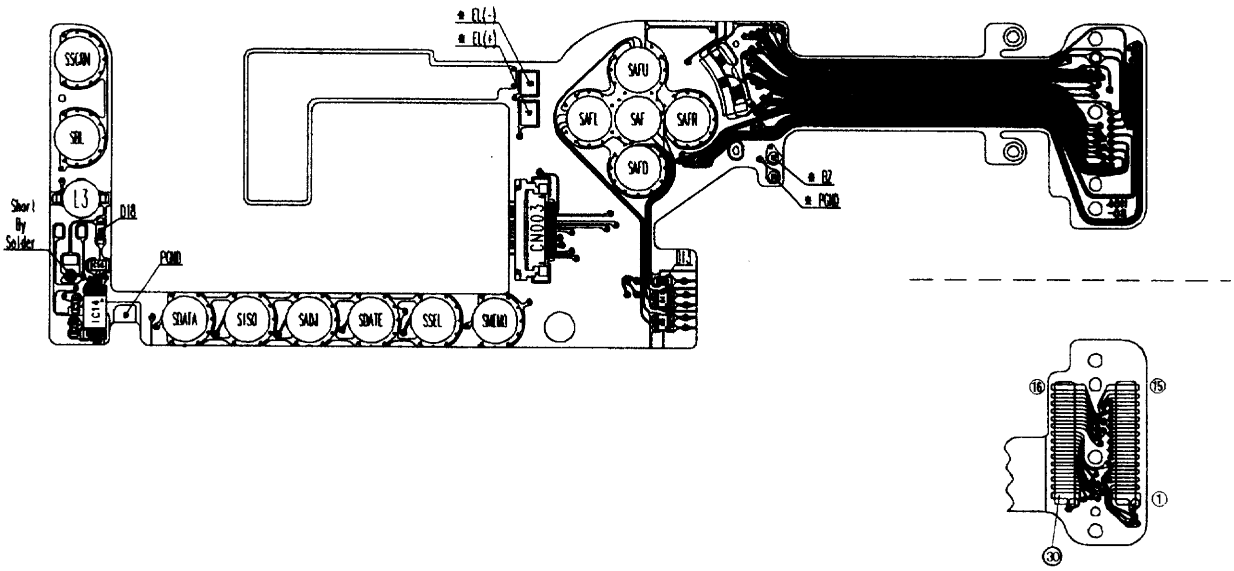


■FPC-J ASSY (0410)
■Jフレキセット (0410)

CN-AJ



■FPC-K ASSY (0411)
■Kフレキセット (0411)



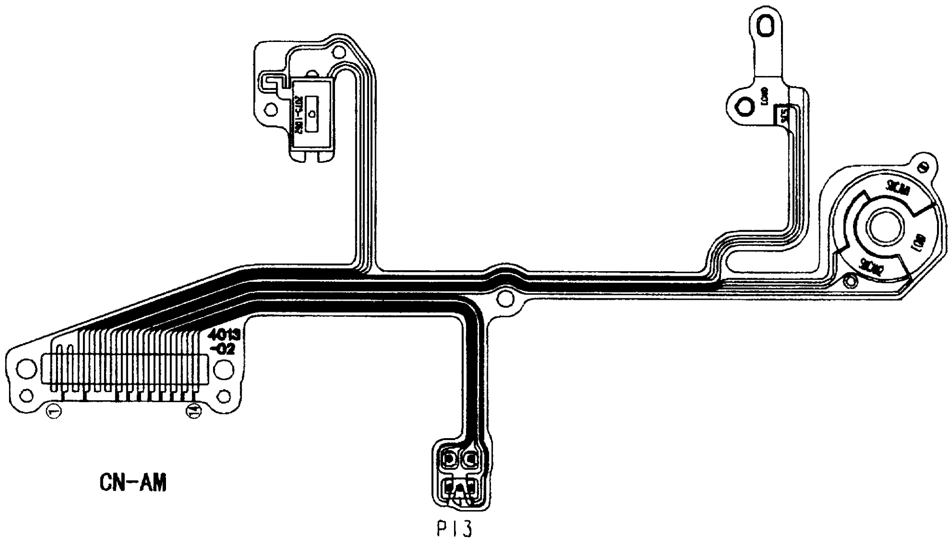
CN-AK

CN-AK

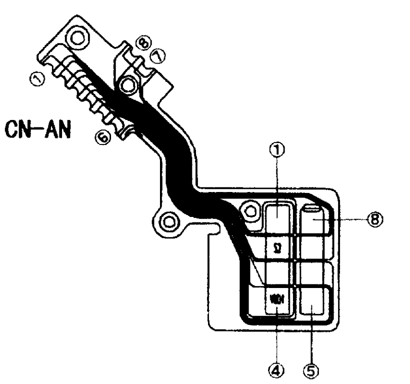
① DOTD6	⑪ DGND	㉑ KEY1
② DOTD5	⑫ VDD1	㉒ (IC3-102)
③ DOTD4	⑬ DOTD7	㉓ DOTA0
④ DOTD3	⑭ KEY0	㉔ SLOCAL
⑤ L3, R97, Q51 (C)	⑮ EGND	㉕ (IC3-55, IC14-9)
⑥ PGND	⑯ PUPCN2	㉖ DOTD2
⑦ KEY2	⑰ BZ	㉗ DOTD1
⑧ SWIDE	⑱ (IC3-138)	㉘ DOTD0
⑨ KEY4	⑲ (IC13-2, IC3-34), Q7	㉙ PUPCN1
⑩ KEY3	⑳ (IC3-32), Q54	㉚ PUPCN0

■WINDING BASE PLATE ASSY (0300)
■巻き上げ台板セット (0300)

CN-AM
①PUPCN3
②PUPCN3
③PUPCN3
④KEY4
⑤SES
⑥EGND
⑦SWCAM1
⑧SWCAM2
⑨EGND
⑩P13 (3)
⑪P13 (2) VCC1
⑫P13 (1)
⑬P13 (5)
⑭P13 (4) DGND



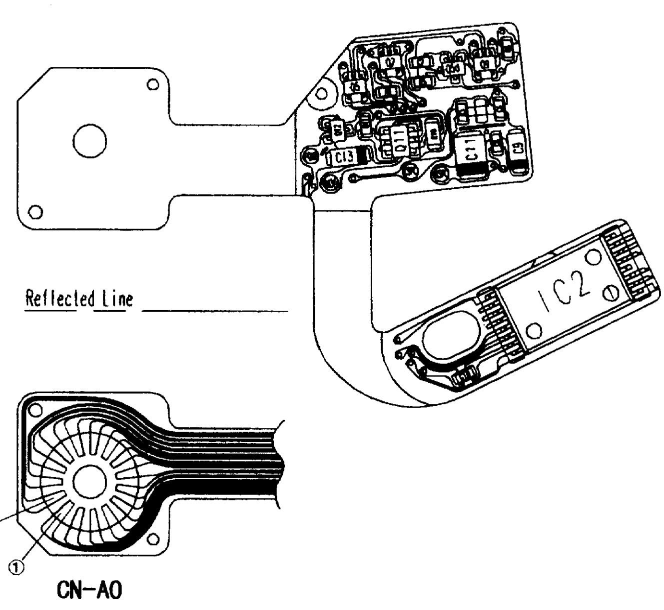
■FPC-N (4014)
■Nフレキ (4014)



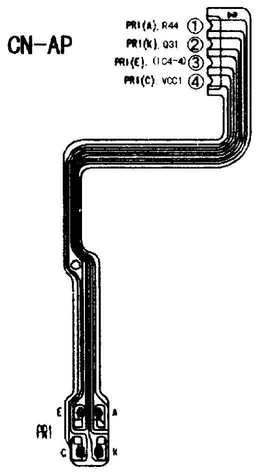
CN-AN
① (IC3-19, FL-DCP), D1, R37
② S2
③ (IC3-25), R37
④ VDD1
⑤ (IC1-100), R36
⑥ (Back contact4, IC1-84IC3-36, IC4-12, IC10-4)
⑦ Q17
⑧ (Back contact3, IC1-85 IC3-2, IC4-38, IC11-2)

■SPC1 HOLDER ASSY (0582)
■SPC1ホルダーセット (0582)

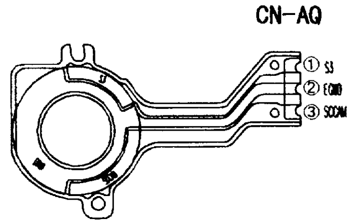
CN-AO
① (IC2-6), Q5
② DOTAO
③ (IC13-2, IC3-34, IC4-15)
④ (IC2-11, IC3-18)
⑤ VDD2
⑥ VDD1
⑦ DGND
⑧ (IC3-13), Q9, Q12
⑨ VDD20
⑩ (IC2-9, IC3-12), Q9, R5
⑪ VDD2D
⑫ AGND
⑬ VP
⑭ PGND
⑮ (IC2-3, IC3-6, IC16-1), R7, R8, R9



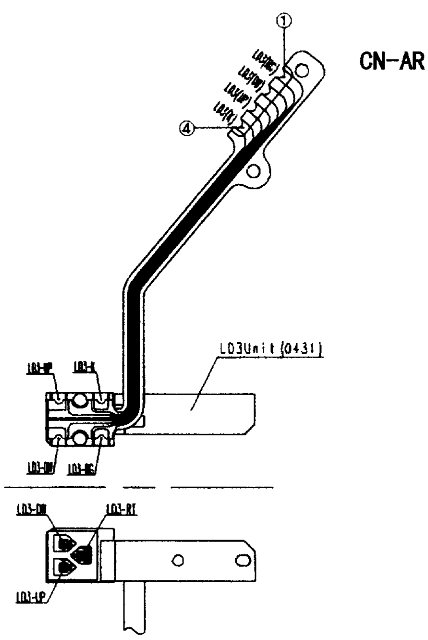
■FPC-P ASSY (0416)
■Pフレキセット (0416)

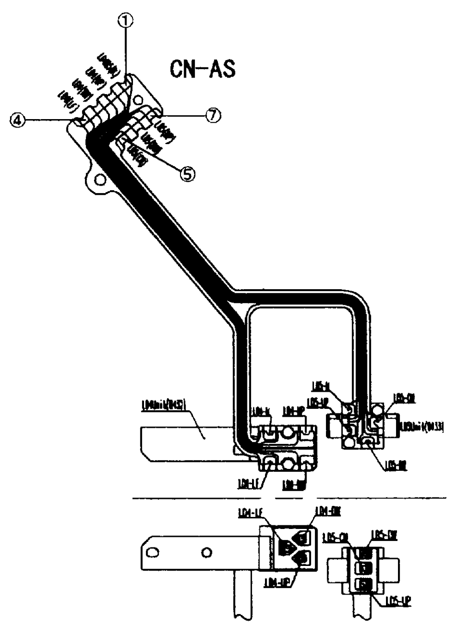


■AF/CHARGE BASE PLATE ASSY (0521)
■AF/チャージ台板セット (0521)

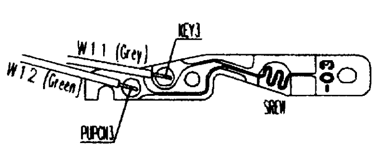


■PENTAPRISM ASSY (0580)
■ペンタプリズムセット (0580)

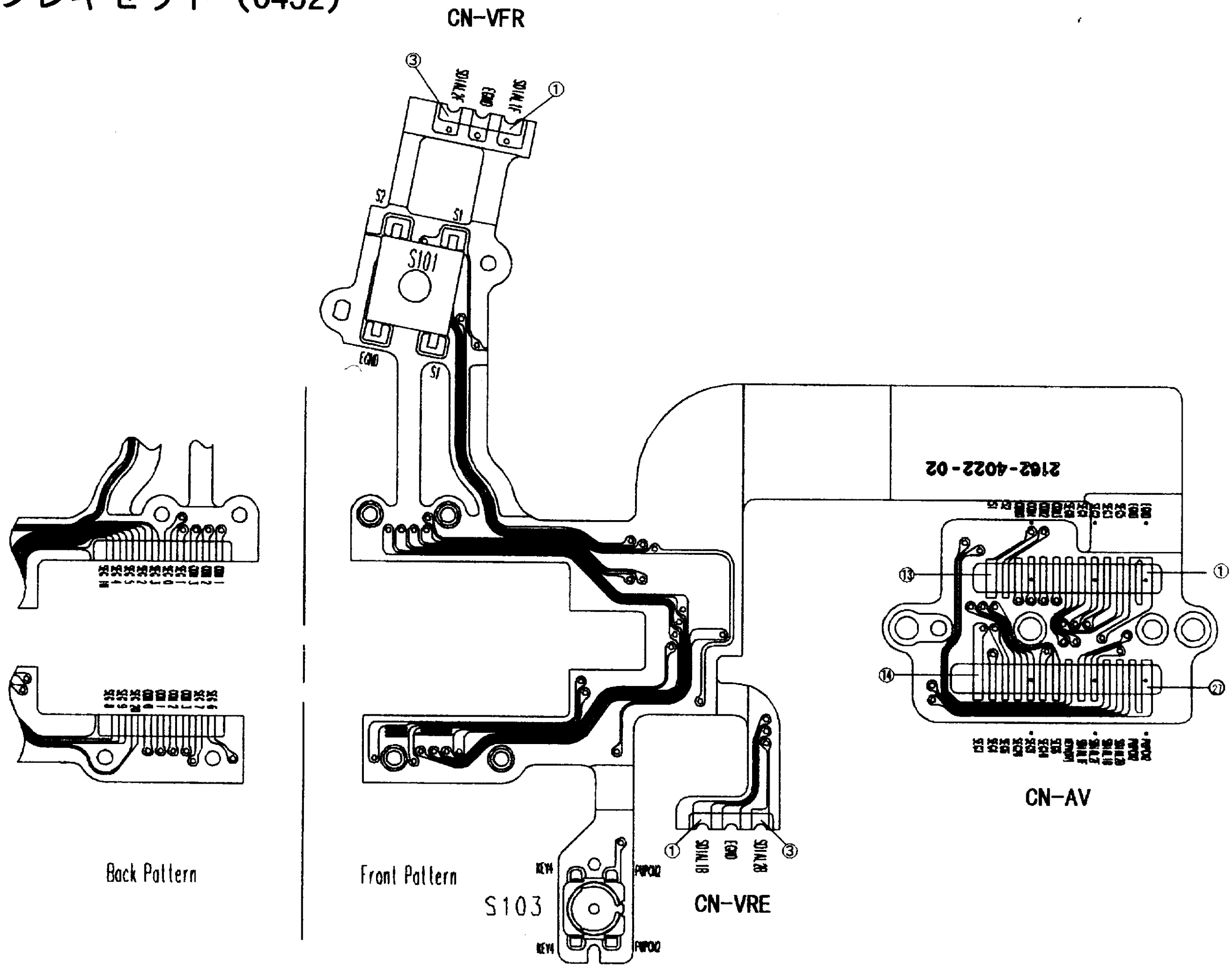




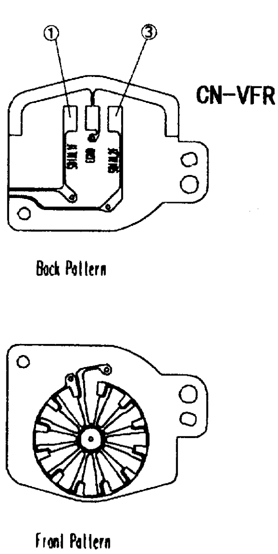
■FPC-U (4021)
■Uフレキ (4021)



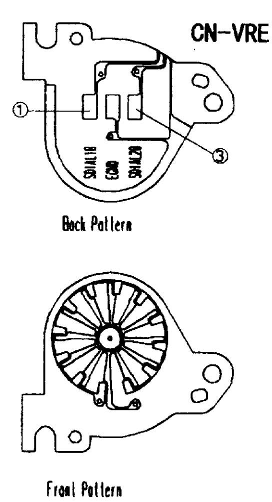
■FPC-V ASSY (0452)
■Vフレキセット (0452)



■FRONT CONTROL DIAL PCB (4035)
■前ダイヤル基板 (4035)



■REAR CONTROL DIAL PCB (4036)
■後ダイヤル基板 (4036)



No. QS FA 2162-S01E Sep..2000

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162 Series

MODEL DYNAX 7
MAXXUM 7
α-7

■ About Focusing Screen Replacement

Whenever replacing the focusing screen to a different type between G/L/S and M/ML, data update is essential. Otherwise, exposure data will be incorrect because of change in diffusion characteristics.

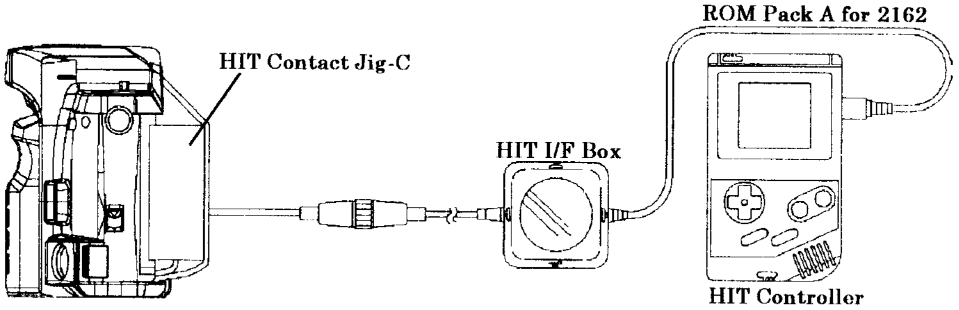
Equipment Required

HIT Controller
ROM PACK A for 2162
HIT Contact Jig-C
I/F Box for HIT

Procedure

1. Set up the equipment as in Fig. 1.
2. Select ASSIST MODE from the main menu, and press SELECT button.
3. Select MATTE TYPE SET from the assist mode menu, and press SELECT button.
4. Select an appropriate type from the menu using the control pad (Up/Down).
   SET STANDARD MATTE Focusing Screen Type-G/L/S
   SET M/ML MATTE Focusing Screen Type M/ML
5. Press the shutter-release button partway down (S1 ON) according to the display.
   "COMPLETE" appears on the screen when the data update is complete.
6. Press SELECT button to return to the assist mode menu.

■ Fig. 1



SU

This information should be filed in your service manual.

MINOLTA CO.,LTD.

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162 Series

MODEL DYNAX 7 / MAXXUM 7 / α-7

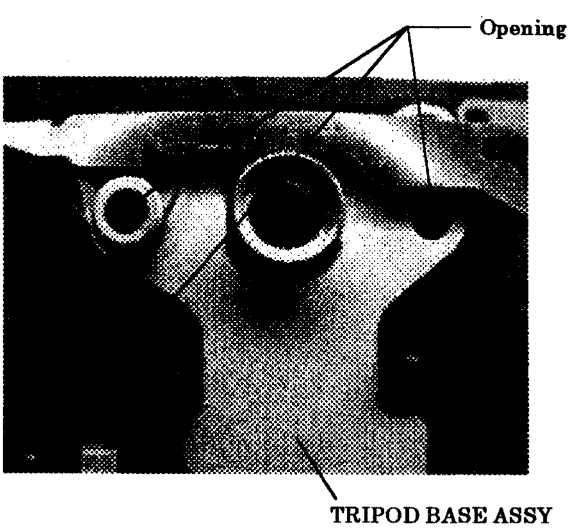
■ AF Adjusting Screw Fixation

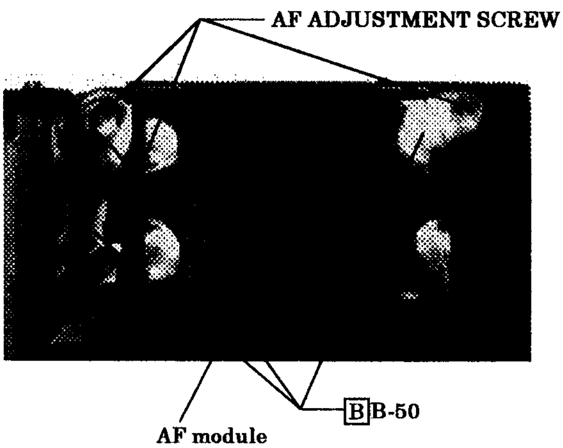
AF adjusting screws #2658 may be loosened after repeated vibrations at shutter-release to cause focus failure. Affix the screws as below.

Adhesive
B-50

Note
Be sure to complete AF adjustments before affixing the screws.

Procedure
1. Insert the tip of the syringe from an opening on the tripod base assy.
2. Inject B-50 to each designated point between the AF adjustment screw and the AF module.
3. Keep the top of the camera down, and allow it to dry for more than 2 hours. Avoid applying any impact to the camera until the adhesive dries up completely.





This information should be filed in your service manual.

MINOLTA CO.,LTD.

No. QS FA 2162-S03E Dec..2000

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162 Series

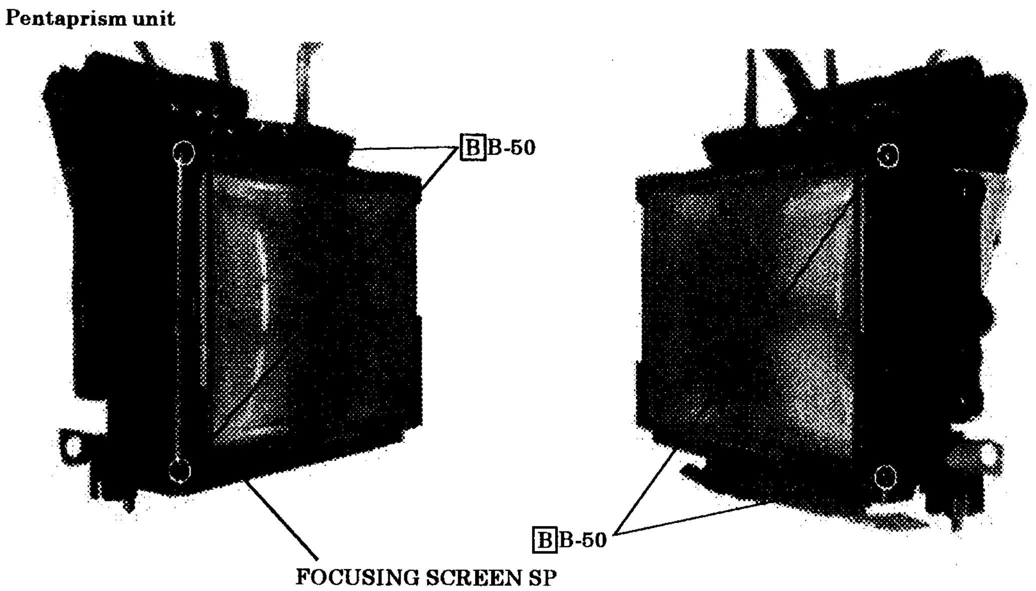
MODEL DYNAX 7
MAXXUM 7
α-7

■ Focusing Screen SP Fixation

Dust may enter to the rear side of the focusing screen. Apply B-50 to the focusing screen SP #5016 to prevent dust from entering.

Adhesive
B-50

Procedure
1. Install the focusing screen SP to the pentaprism unit.
2. Apply B-50 to the designated opening.



This information should be filed in your service manual.

MINOLTA CO.,LTD.

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162 Series

MODEL DYNAX 7 / MAXXUM 7 / α-7

■ Measurement of Current Consumption

This model is equipped with a built-in secondary battery for date/time backup, to which the camera batteries (Two CR123A cells) supply power regardless of the main switch on/off. As it takes a few days to fully recharge the backup battery after loading CR123As, current consumption reading may exceed the standard. In that case, measure the current excluding consumption for the backup battery. See below.

Measuring Procedure

1. Connect another condenser of 4700microF <7981-9010-11> to terminals of Leak Tester CL-1201, adding to the existing one in parallel.
2. Set the power mode of the tester to "EXT".
3. Set the camera to the exclusive measurement mode. (See below.)
4. Read current consumption.

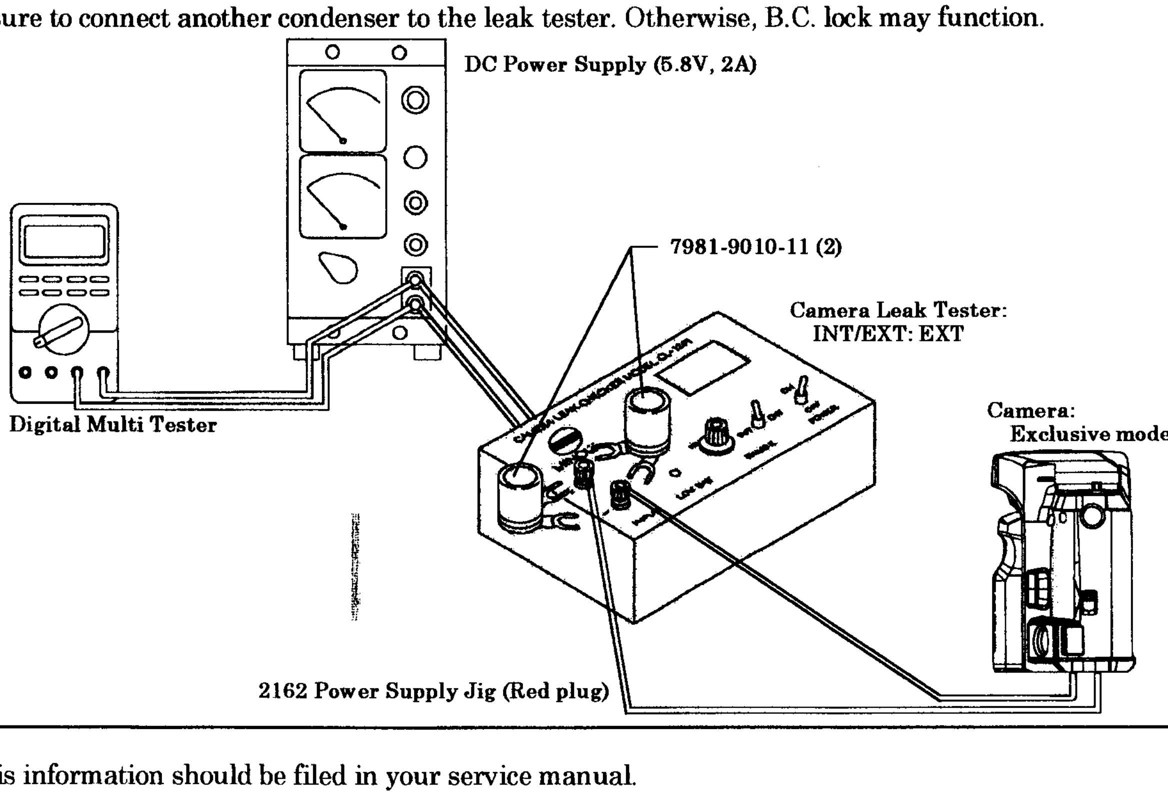
Setting the exclusive measurement mode

Set the camera to measurement mode as below.

1. Turn on the camera.
2. Press and release the Navigation-display Illuminator button, Enter button (in the control panel) and Lens-release button simultaneously.
   The navigation display becomes blank. Now the measurement mode is set.
   To cancel the mode, open the back cover. The indicators appear in the display.

Note:

Use external power supply (DC power supply) for measurement. Direct power from the leak tester (INT) may disable camera setting to the exclusive mode.
Be sure to connect another condenser to the leak tester. Otherwise, B.C. lock may function.



This information should be filed in your service manual.

MINOLTA CO.,LTD.

No. QS FA 2162-S05E Dec..2000

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162 Series

MODEL DYNAX 7 / MAXXUM 7 / α-7

■ Repair Method for Light Leak from Viewfinder LED

Symptom

A band of green fog appears laterally across the frame from the lower right or left on the print.

Cause

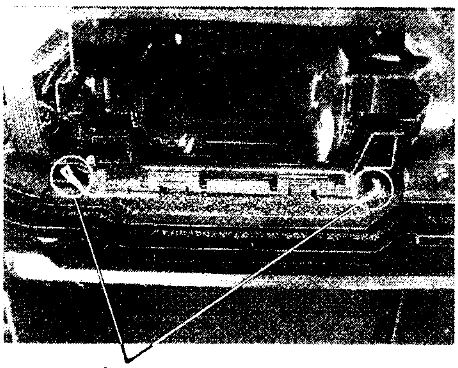
Th shield tape affixed beneath the prism for the LCD2 is installed out of position being pinched between the shutter assy and the pentaprism assy. And the LED to illuminate the LCD2 leaks light through a gap between the body and the shutter assy.

Check and Repair Procedure

1) Remove the external parts and EYEPIECE FRAME ASSY (#2162-0139-01).
2) Confirm the installation status of the shield tape by looking into between LCD2 HOLDER ASSY (#2162-0503) and LIGHT SHIELD SPONGE-A (#2162-1002). Then be sure to check both ends of the tape. (See Fig. 1.)
3) Remove SCREW (#9747-1755-07) (x2) then SPC1 PRESSURE (#2162-5020).
4) Remove SCREW (#9747-1750-07) (x2) then EYEPIECE LENS HOLDER ASSY (#2162-0584).
5) If the shield tape is found pinched, re-arrange it using tweezers. (See Fig.2 and 3.) Then check the existence of the shield plate of the shutter assy. (See Fig.4.)

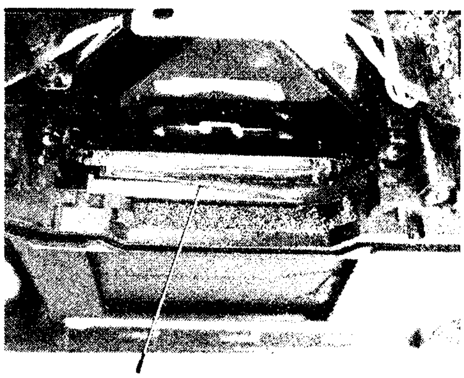
Note: Check the shield tape at any repair work to remove the top cover assy.

■ Fig. 1



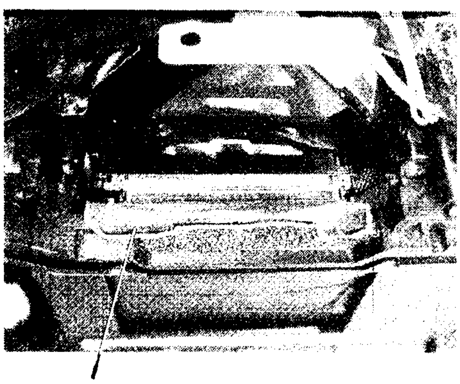
Both ends of the shield tape

■ Fig. 2



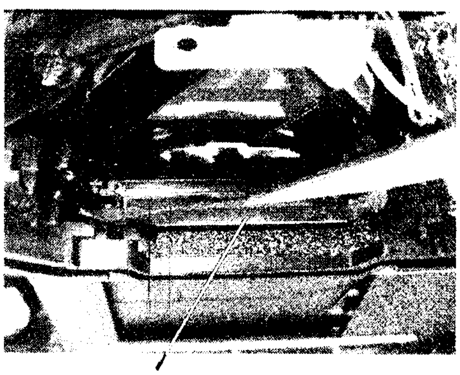
The shield tape is pinched.

■ Fig. 3



Normal state of the shield tape

■ Fig. 4



The shield plate of the shutter assy

This information should be filed in your service manual.

MINOLTA CO.,LTD.

SERVICE MANUAL	CODE NO.	2162 Series
SUPPLEMENTARY INFORMATION	MODEL	DYNAX 7 MAXXUM 7 α-7

■ Manual rewind button modification for better operation

Symptom

Manual rewind button may not work when depressed.

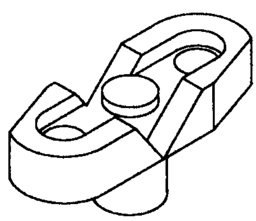
Cause

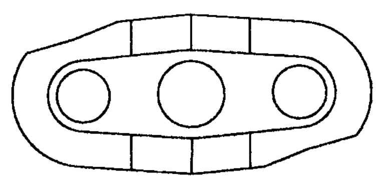
Insufficient contact between the flex pattern and the manual rewind button

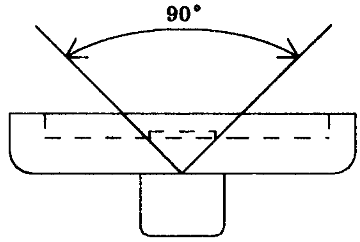
Remedy

Cut off the designated portions of the button using tools like a knife.

REWIND BUTTON
2089-1422







This information should be filed in your service manual.

MINOLTA CO.,LTD.

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162

MODEL DYNAX 7
MAXXUM 7
α 7

■ Remedy for erroneous Date/Time display

1. Symptom

The following symptoms are confirmed.

- Date/Time is automatically advanced/delayed.
- Impossible figure is recorded; "13" as Month, "25" as Hour data.
- Date/Time is automatically reset to 2000.1.1.

2. Cause

Static electricity affects Date/time data in IC-13 (Date IC).
When discharged through the strap eyelet or lens mount of camera, the static electricity (approx. 8kV) flows to IC-13 via its GND.

3. Repair

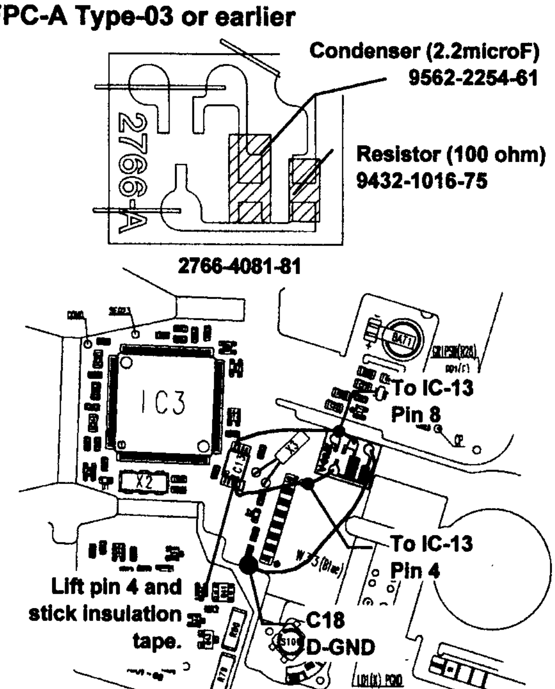
Prepare the parts listed below, and install to FPC-A.
For FPC-A of type-03 (2162-4001-03) or earlier, add a resistor (100 ohm) and a condenser (2.2microF) to IC-13 GND. For FPC-A of type-04 (2162-4001-04) or later, add a condenser (2.2microF).

3-1. Necessary Parts

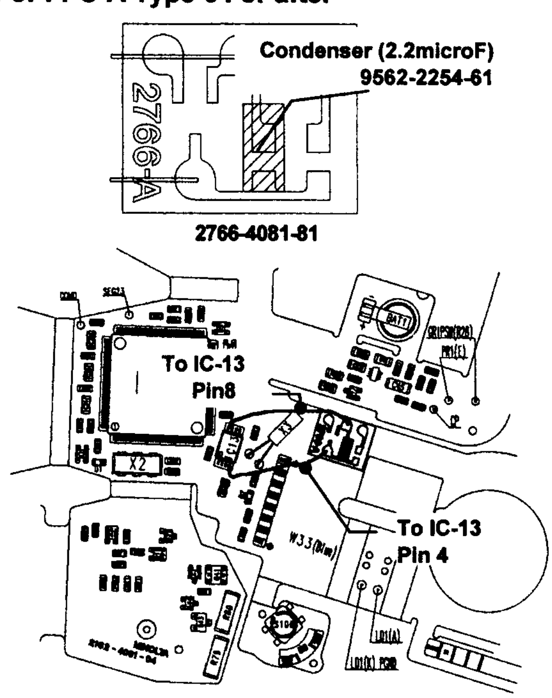
FPC-A	Sub-PCB	Condenser of 2.2microF	Resistor of 100ohm	Insulation tape	Lead wires
Type-03 or earlier	2766-4081-81 See Fig. 1.	9562-2254-61	9432-1016-75	9384-2290-90 3x3mm	9391-0807-xx 35mm x 3
Type-04 or after	2766-4081-81 See Fig. 2	9562-2254-61			9391-0807-xx 35mm x 2

3-2. Wiring

For FPC-A Type-03 or earlier



For FPC-A Type-04 or after



This information should be filed in your service manual.
サービスマニュアルにファイルして使用してください。

 No. QS FA 2162-S08E. August 2001

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO.	2162 Series
MODEL	DYNAX 7 MAXXUM 7 α-7

■ Remedy for film chamber lock problem

Symptom

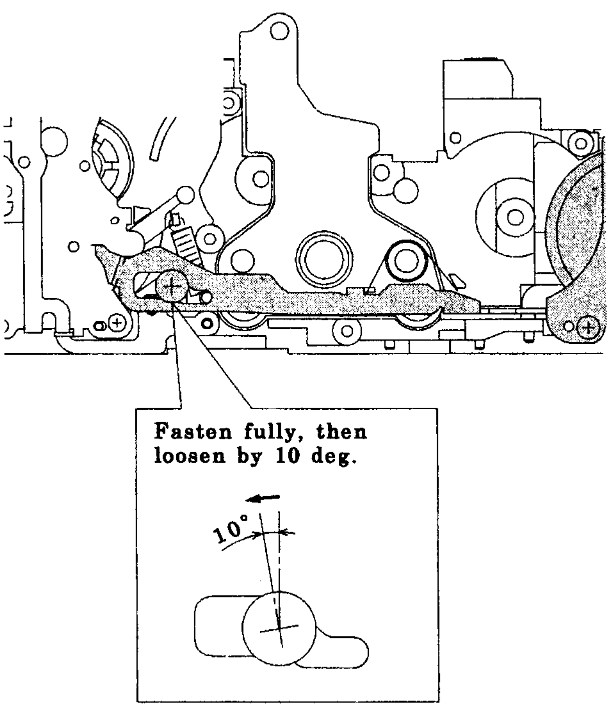
The film chamber lock cannot be canceled even though film rewind is complete, so the back cover does not open.

Cause

The screw #9749-1735-07 that affixes SAFETY LOCK LEVER #2162-3070-01 was tightened too much at assembly to interrupt lever operation.

Repair

Re-fasten the screw.
Firstly fasten until it stops, then loosen it by 10 degrees.



This information should be filed in your service manual.

MINOLTA CO.,LTD.

SERVICE MANUAL SUPPLEMENTARY INFORMATION

CODE NO. 2162-250 -650 -091

MODEL DYNAX 7 LIMITED
α-7 LIMITED

■ Disabling Opening and Closing Screens

Both opening and closing screens can be skipped permanently.
Once both opening and closing screens are disabled by the HIT system, the screens will be not displayed until enabling the function in the same way.

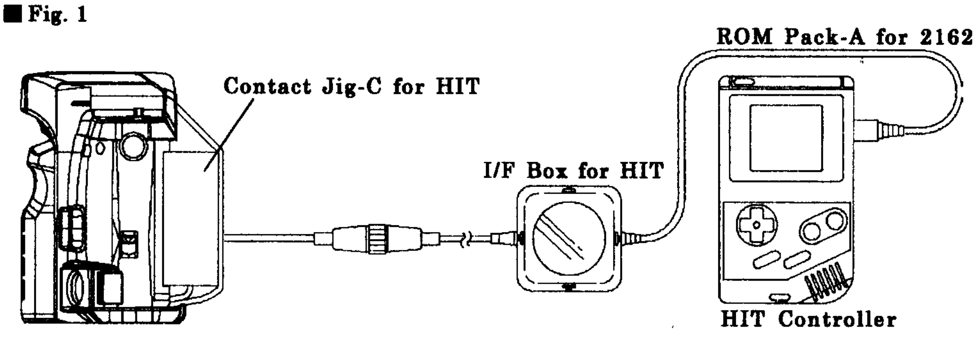
Equipment Required

HIT Controller
ROM Pack-A for 2162
Contact Jig-C for HIT
I/F Box for HIT

Procedure

1. Set up the equipment as in Fig. 1.
2. Select "ASSIST MODE" from the main menu and press SELECT Button.
3. Select "OPENING DISPLAY SET" from the ASSIST MODE menu using Control Pad, then press SELECT Button.
4. According to the display, press Shutter-release Button partway down.
5. Select "ON" or "OFF" by pressing Button-A/ -B, then press SELECT Button.
   According to the display, press Shutter-release Button partway down. The selected feature is set.

■ Fig. 1



SUPPLYMENTARY INFORMATION

This information should be filed in your service manual.

MINOLTA CO.,LTD.